

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:11:44 ; Search time 196 Seconds

(without alignments)
446.104 Million cell updates/sec

Title: US-09-815-306a-34

Sequence: 1 LPICGGAARCVTLRDLFD.....HKIDNYLKLRITHHNNC 199

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

A_Geneseq_21.*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*
9: geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1042	100.0	200	ADG82526	Adg82526 Human pro
2	1042	100.0	227	AAg78337	Agg78337 Mutant hu
3	1042	100.0	385	ADG82531	Adg82531 Prolactin
4	1035	99.3	199	AAy31764	AAy31764 Human pro
5	1035	99.3	199	ABG34847	ABg34847 Human pro
6	1035	99.3	199	ABU09878	ABu09878 Human pro
7	1035	99.3	199	ADQ38214	Adq38214 Modified
8	1035	99.3	199	ADR90662	Adr90662 Human pro
9	1035	99.3	200	AAW92258	Aaw92258 Human ant
10	1035	99.3	200	ADQ38217	Adq38217 Recombina
11	1035	99.3	227	AAK05231	AAk05231 AA sequen
12	1035	99.3	227	AAg78336	AAg78336 Human pro
13	1035	99.3	227	AAU28057	AAu28057 Novel hum
14	1035	99.3	227	ADD48810	Ad48810 Human pro
15	1035	99.3	227	ADQ38216	Adq38216 Precursor
16	1035	99.3	227	ADY62734	Ady62734 Human pro
17	1035	99.3	351	AAr78691	AAr78691 Prolactin
18	1031	98.9	228	AAW23626	AAw23626 Prolactin
19	1031	98.9	228	AAW23620	AAw23620 Prolactin
20	1030	98.8	199	AAy78428	AAy78428 Human pro
21	1030	98.8	199	ADK41867	ADk41867 Human pro
22	1028	98.7	199	ABU09846	ABu09846 Human pro
23	1028	98.7	359	AAK05805	AAk05805 DHFR-prol
24	1026	98.5	199	ADQ38221	Adq38221 Modified

25	1026	98.5	227	1	AAp82079	AAp82079 Human pre
26	1020	97.9	199	8	ADR20895	Adr20895 Human mat
27	1018.5	97.7	579	8	ADG82532	Adg82532 Prolactin
28	1018.5	97.7	942	8	ADG82533	Adg82533 Prolactin
29	1014	97.3	199	2	AAW23629	AAw23629 Human pro
30	1010	96.9	199	8	ADQ38222	Adq38222 Modified
31	1002	96.2	199	8	ADQ38220	Adq38220 Modified
32	1001	96.1	199	8	ADR20988	Adr20988 Human pro
33	998	95.8	199	8	ADR20989	Adr20989 Human pro
34	986	94.6	199	8	ADQ38219	Adq38219 Modified
35	983	94.3	199	8	ADR20990	Adr20990 Human pro
36	970	93.1	199	8	ADR20991	Adr20991 H180D/N18
37	960	92.1	199	8	ADQ38218	Adq38218 Modified
38	932	89.4	212	8	ABW83819	ABw83819 Human dia
39	887	85.1	199	6	ABU09858	ABu09858 Ancestral
40	873	83.8	199	6	ABU09856	ABu09856 Horse pro
41	869	83.4	199	6	ABU09855	ABu09855 Camel pro
42	865	83.0	199	6	ABU09864	ABu09864 Ancestral
43	858	82.3	199	6	ABU09854	ABu09854 Pig prola
44	857	82.2	199	6	ABU09850	ABu09850 Feedback w
45	786	75.4	240	6	ABR43658	ABr43658 Ovine pro

ALIGNMENTS

RESULT 1	ADG82526	ADG82526 standard; protein; 200 AA.
ID	ADG82526	ADG82526 standard; protein; 200 AA.
XX	ADG82526	
AC	ADG82526	
DT	11-MAR-2004	(first entry)
XX		
DE	Human prolactin-G129R.	
XX		
KW	Human; prolactin; antagonist; cytostatic; gene; mutant; mutein.	
OS	Synthetic.	
OS	Homo sapiens.	
FH	Key	Location/Qualifiers
FT	Misc-difference 130	/note= "Wild-type Gly substituted by Arg"
XX		
PN	WO2003102148-A2.	
XX		
PD	11-DEC-2003.	
XX		
PF	02-JUN-2003; 2003WO-US017216.	
XX		
PR	31-MAY-2002; 2002US-0384121P.	
XX		
PA	(GREEN-) GREENVILLE HOSPITAL SYSTEM.	
PA	(CHEN/) CHEN W Y.	
PI	Chen WY;	
DR	WPI; 2004-043098/04.	
DR	N-PDSB; ADG82527.	
PT	Treating cancer comprises administering to a patient an amount of a	
PT	protein having a receptor-antagonizing domain (e.g. prolactin-antagonist	
PT	domain) and an angiogenesis-inhibiting domain (e.g. endostatin or	
PT	angiotensin).	
PS	Claim 10; SEQ ID NO 1; 60pp; English.	
XX		
CC	The present sequence is the protein sequence of human prolactin-G129R, in	
CC	which the native Gly-129 residue is substituted by Arg. The invention	
CC	provides medicaments that are capable of interfering with the prolactin	
CC	signalling mechanism in a cancer cell and inhibiting angiogenesis in	
CC	tumour cell lines. A claimed method for treating cancer involves	

CC administering a protein having a receptor-antagonizing domain and an
CC angiogenesis inhibiting domain. The protein is especially a prolactin
CC antagonist-endoestatin ADG82531, a prolactin antagonist-angiostatin
CC ADG82532 or a prolactin antagonist-Flk-1-bp ADG82533 fusion protein,
CC where the prolactin antagonist is prolactin-G129R. The combined effects
CC of endocrine-based and targeted anti-angiogenesis therapies greatly
CC enhance the treatment of cancer.

XX
SQ Sequence 200 AA;

Query Match 100.0%; Score 1042; DB 8; Length 200;
Best Local Similarity 100.0%; Pred. No. 3,7e-93;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICGGARQCVTLRLDFRAVVLISHYIHNLSSEMFSEPKRYTHGRGFTTKAINSCHT 60
DB 2 LPICGGARQCVTLRLDFRAVVLISHYIHNLSSEMFSEPKRYTHGRGFTTKAINSCHT 61
QY 61 SSLATPEDEKQAQOMNQKDFSLIVSILRSWNEPLVHLVTEVRGQEAPEALISKAVIE 120
DB 62 SSLATPEDEKQAQOMNQKDFSLIVSILRSWNEPLVHLVTEVRGQEAPEALISKAVIE 121
QY 121 EOTRRLERMEILYSQVHPETKENIYPWMSGLSLQMADEESRLSAYYNLLHCLRRDSH 180
DB 122 EOTRRLERMEILYSQVHPETKENIYPWMSGLSLQMADEESRLSAYYNLLHCLRRDSH 181

QY 181 KIDNYLKLKCRILHNNC 199
DB 182 KIDNYLKLKCRILHNNC 200

RESULT 2
AAG78337
ID AAG78337 standard; protein; 227 AA.

XX AC AAG78337;

DT 22-JAN-2002 (first entry)

DE Mutant human prolactin (hPRL-G129R), a prolactin receptor antagonist.

XX Breast cancer; apoptosis inducer; positive immunomodulator domain;
KM Immune response; cytostatic; T lymphocyte cytotoxicity enhancer;
KM STAT phosphorylation inhibitor; prolactin antagonist; interleukin-2;
KM IL-2; interferon gamma; IFN gamma; IL-12; mutant; mutein.

OS Homo sapiens.
OS Synthetic.

XX Key Location/Qualifiers
FH Misc-difference 129
FT /note= "Arg replaces wild-type Gly"

PN WO200170985-A2.

XX 27-SEP-2001.

XX 23-MAR-2001; 2001WO-US009284.

XX 23-MAR-2000; 2000US-0191457P.

XX (GREE-) GREENVILLE HOSPITAL SYSTEM.

XX Chen WY, Wagner TE;

XX WPI; 2001-611504/70.

XX Novel polypeptide for treating cancer comprises a receptor antagonizing
PT domain which also functions as an apoptosis domain, such as the prolactin
PT antagonist domain, and a positive immunomodulator domain.

PS Example 3; Page; 47pp; English.

CC This sequence represents a mutant form of human prolactin (AAG78336)
CC where Gly129 is substituted with Arg. The protein is a prolactin receptor
CC antagonist and disrupts the normal prolactin apoptosis-blocking
CC mechanism. The specification describes a novel protein comprising a
CC receptor antagonizing domain (having a fully defined sequence as given in
CC the specification, or its conservative variant) and a positive
CC immunomodulator domain. The object of the invention is to provide a
CC medicament that is capable of interfering with the prolactin signaling
CC of a cancer cell, a pharmaceutical composition comprising the protein and
CC a carrier vehicle is described. A receptor antagonizing domain is a
CC ligand that specifically binds to a receptor associated with a disorder
CC like cancer and can be an apoptosis-promoting domain. A positive
CC immunomodulator domain is one that augments an immune response, preferably
CC against the target cell, e.g. interleukin (IL)-2, interleukin (IL)-12 and
CC interferon (IFN) gamma. The protein has cytostatic activity and is useful
CC for treating cancer in a patient. The protein is an apoptosis inducer, a
CC T lymphocyte cytotoxicity enhancer, a signal transducer and activator of
CC transcription (STAT) phosphorylation inhibitor and a prolactin
CC antagonist. The targeted therapy approach is designed to provide
CC dramatically decreased systemic concentrations of positive
CC immunomodulator domain, e.g. IL-2, thereby reducing its toxicity in vivo.
CC NOTE: The present sequence is not given in the specification but has been
CC created using the information given in Example 3

SQ Sequence 227 AA;

Query Match 100.0%; Score 1042; DB 4; Length 227;
Best Local Similarity 100.0%; Pred. No. 4.4e-93;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICGGARQCVTLRLDFRAVVLISHYIHNLSSEMFSEPKRYTHGRGFTTKAINSCHT 60
DB 29 LPICGGARQCVTLRLDFRAVVLISHYIHNLSSEMFSEPKRYTHGRGFTTKAINSCHT 88
QY 61 SSLATPEDEKQAQOMNQKDFSLIVSILRSWNEPLVHLVTEVRGQEAPEALISKAVIE 120
DB 89 SSLATPEDEKQAQOMNQKDFSLIVSILRSWNEPLVHLVTEVRGQEAPEALISKAVIE 148
QY 121 EOTRRLERMEILYSQVHPETKENIYPWMSGLSLQMADEESRLSAYYNLLHCLRRDSH 180
DB 149 EOTRRLERMEILYSQVHPETKENIYPWMSGLSLQMADEESRLSAYYNLLHCLRRDSH 208

QY 181 KIDNYLKLKCRILHNNC 199
DB 209 KIDNYLKLKCRILHNNC 227

RESULT 3
ADG82531
ID ADG82531 standard; protein; 385 AA.

XX ADG82531;

DT 11-MAR-2004 (first entry)

DE Prolactin-G129R-endoestatin fusion protein.

XX Human; prolactin; antagonist; cytostatic; mutein; mutant; endostatin.
KM Synthetic.
OS Homo sapiens.

XX Key Location/Qualifiers
FH Domain 2..200
FT /label = Prolactin-G129R

FT Misc-difference 130
FT /note= "Wild-type Gly substituted by Arg"

FT Domain 203..385
FT /label = Endostatin

PN WO2003102148-A2.

XX 11-DEC-2003.

XX 02-JUN-2003; 2003WO-US017216.
 XX 31-MAY-2002; 2002US-0384121P.
 XX (GREG-) GREENVILLE HOSPITAL SYSTEM.
 PA (CHEN/) CHEN W Y.
 XX Chen WY;
 XX MPI: 2004-043098/04.
 DR N-PSDB; ADG82530.
 XX
 PT Treating cancer comprises administering to a patient an amount of a
 PT protein having a receptor-antagonizing domain (e.g. prolactin-antagonist
 PT domain) and an angiogenesis-inhibiting domain (e.g. endostatin or
 PT angiostatin).
 XX
 PS Disclosure; SEQ ID NO 6; 60pp; English.
 XX
 CC The present sequence is the protein sequence of a fusion protein
 CC comprising human prolactin-g129R, in which the native Gly-129 residue is
 CC substituted by Arg, and endostatin. The invention provides medicaments
 CC that are capable of interfering with the prolactin signalling mechanism
 CC in a cancer cell and inhibiting angiogenesis in tumour cell lines. A
 CC claimed method for treating cancer involves administering a fusion
 CC protein having a receptor-antagonizing domain and an angiogenesis
 CC inhibiting domain, such as the present fusion protein. The combined
 CC effects of endocrine-based and targeted anti-angiogenesis therapies
 CC greatly enhance the treatment of cancer.
 XX
 SQ Sequence 385 AA;

Query Match 100.0%; Score 1042; DB 8; Length 385;
 Best Local Similarity 100.0%; Pred. No. 8.9e-93;
 Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 LPICPGGARCOVTLRLDFRAVVLSHYTHNLSEMFSEFDKRYTHRGFTKAINSCHT 60
 DB 2 LPICPGARCOVTLRLDFRAVVLSHYTHNLSEMFSEFDKRYTHRGFTKAINSCHT 61
 QY 61 SSLATPEDEYKQAOQNMQKFLSLIVSLKSNPEPLVHLYTEVRGMDEAPALISKAVEIE 120
 DB 62 SSLATPEDEYKQAOQNMQKFLSLIVSLKSNPEPLVHLYTEVRGMDEAPALISKAVEIE 121
 QY 121 EQRKRLERMEELIVSOVHPETKENETYPWMSGLPLOMDEBSRLSAYYNLLHCLARDSH 180
 DB 122 EQRKRLERMEELIVSOVHPETKENETYPWMSGLPLOMDEBSRLSAYYNLLHCLARDSH 181
 QY 181 KIDNYLKLKCRILHNHNC 199
 DB 182 KIDNYLKLKCRILHNHNC 200

RESULT 4
 AAY31764
 ID AAY31764 standard; protein; 199 AA.
 XX
 AC AAY31764;
 XX
 DT 06-DEC-1999 (first entry)
 XX
 DE Human prolactin.
 XX
 KW Prolactin; human; variant; protein engineering.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 59 /note= "optionally substituted by Phe in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 60

FT /note= "optionally substituted by Ser in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 61 /note= "optionally substituted by Glu in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 63 /note= "optionally substituted by Ile in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 64 /note= "optionally substituted by Pro in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 67 /note= "optionally substituted by Ser in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 68 /note= "optionally substituted by Asn in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 69 /note= "optionally substituted by Arg in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 71 /note= "optionally substituted by Glu in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 72 /note= "optionally substituted by Thr in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 75 /note= "optionally substituted by Lys in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 76 /note= "optionally substituted by Ser in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 77 /note= "optionally substituted by Asn in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 78 /note= "optionally substituted by Lys in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 79 /note= "optionally substituted by Glu in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 180 /note= "optionally substituted by Asp in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 184 /note= "optionally substituted by Thr in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 185 /note= "optionally substituted by Phe in human prolactin
 FT variant of Claim 8"
 FT Misc-difference 187 /note= "optionally substituted by Arg in human prolactin
 FT variant of Claim 8"
 PN US955346-A.
 XX 21-SEP-1999.
 PD
 XX
 PF 07-JUN-1995; 95US-00476999.
 XX
 PR 28-OCT-1988; 88US-00264611.
 PR 26-OCT-1989; 89US-00428066.
 PR 27-APR-1992; 92US-00875204.
 PR 13-OCT-1992; 92US-00960227.
 PR 02-FEB-1994; 94US-00190723.
 XX
 PA (GETH) GENENTECH INC.
 XX
 PI Cunningham BC, Wells JA;
 XX
 DR MPI; 1999-560495/47.
 XX
 FT Isolated nucleic acids encoding variants of human prolactin and placental

PT lactogen useful for identifying active domains within those proteins.
XX
XX Claim 7; Fig 2; 86pp; English.
XX
XX This is the amino acid sequence of human prolactin. The invention
CC provides a method for the systematic analysis of the structure and
CC function of polypeptides by identifying active domains which influence
CC the activity of the polypeptide with a target substance, and a method for
CC identifying the active amino acid residues within the active domain of a
CC polypeptide. It also provides polypeptide variants comprising segment-
CC substituted and residue-substituted growth hormones, prolactins and
CC placental lactogens. Claimed variants of human prolactin have 1-19 amino
CC acid substitutions when compared to the wild-type sequence, selected from
CC H59F, T60S, S61E, L63I, A64P, E67S, D68N, K69R, Q71E, A72T, M75K, N76S,
CC Q77N, K78I, D79E, H180D, N184T, Y185F and K185R. These mutations
CC inactivate the active domains and binding sites of the protein.
CC Identifying receptor binding sites in hormones permits the rational
CC design of receptor specific variants. Nucleic acids encoding the
CC variants, expression vectors and host cells are also claimed
XX
SQ Sequence 199 AA;
Query Match 99.3%; Score 1035; DB 2; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 LPICPGGAACQVTLRDLFRAVVLISHYIHNLSSEMFSEPKRYTHRGFTTKAINSCHT 60
DB 1 LPICPGGAACQVTLRDLFRAVVLISHYIHNLSSEMFSEPKRYTHRGFTTKAINSCHT 60
OY 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLYTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLYTEVRGMOEAPAILSKAVEIE 120
OY 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 181 KIDNYLKLKCRRIIHNHNC 199
DB 181 KIDNYLKLKCRRIIHNHNC 199
OY 181 KIDNYLKLKCRRIIHNHNC 199
DB 181 KIDNYLKLKCRRIIHNHNC 199
RESULT 5
ABG94847 standard; protein; 199 AA.
ID ABG94847
XX AC ABG94847;
XX DT 03-DEC-2002 (first entry)
XX DE Human prolactin.
XX
XX Growth hormone; placental lactogen; prolactin; active domain; hGH;
KW structure-function relationship; segment-substituted polypeptide.
XX
XX Homo sapiens.
XX
XX US6428954-B1.
XX
XX PD 06-AUG-2002.
XX
XX PF 06-JUN-1995; 95US-00483039.
XX
XX 28-OCT-1988; 88US-00264611.
XX PR 26-OCT-1989; 89US-00428066.
XX PR 27-APR-1992; 92US-00875204.
XX PR 13-OCT-1992; 92US-00960227.
XX PR 02-FEB-1994; 94US-00190723.
XX
XX (GETH) GENENTECH INC.
XX PA Wells JA, Cunningham BC;
XX PI

XX
XX WPI; 2002-696875/75.
DR
XX
XX Identifying active domains within cloned polypeptides of known amino acid
PT sequence by substituting analog segments into the parent polypeptide is
PT useful to determine the relationship between structure and function.
XX
XX Disclosure; Fig 2; 86pp; English.
XX
XX The invention relates to identifying an unknown active domain in a region
CC of known amino acid sequence in a parent polypeptide e.g. human growth
CC hormone (hGH) which has been cloned and has a pre-identified biological
CC activity, where the active domain interacts with a target when the parent
CC polypeptide is in its native-folded form and the interaction is
CC responsible for the biological activity comprising: (a) comparing the
CC amino acid sequence or polypeptide structure in the region of known amino
CC acid sequence of hGH with the amino acid sequence of an analogue
CC structure in a region of known amino acid sequence of an analogue
CC polypeptide (e.g. prolactin, placental lactogen or porcine growth
CC hormone) which has at least 15% homology with hGH alpha-carbon
CC coordinates within about 2-3.5 angstroms of hGH alpha-carbon
CC for about 60% of the analogue sequence, where any interaction of the
CC analogue with the target is different from target interaction with hGH;
CC (b) substituting DNA encoding an analogue polypeptide segment from the
CC analogue into DNA encoding the full length hGH, and expressing a segment-
CC substituted polypeptide; (c) contacting the segment-substituted
CC polypeptide with the target to determine interaction; (d) repeating steps
CC (b) and (c) with a second analogous polypeptide segment; and (e)
CC comparing the difference between activity of the first and second segment
CC -substituted polypeptides as an indication of the location of the unknown
CC active domain in hGH. The method is useful for determining the
CC relationship between structure and function of known polypeptide
CC sequences. The present sequence is that of human growth hormone or its
CC analogue (prolactin, placental lactogen or porcine growth hormone)
XX
SQ Sequence 199 AA;
Query Match 99.3%; Score 1035; DB 5; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 LPICPGGAACQVTLRDLFRAVVLISHYIHNLSSEMFSEPKRYTHRGFTTKAINSCHT 60
DB 1 LPICPGGAACQVTLRDLFRAVVLISHYIHNLSSEMFSEPKRYTHRGFTTKAINSCHT 60
OY 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLYTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAOQMNQKDFSLIVSILRSWNEPLVHLYTEVRGMOEAPAILSKAVEIE 120
OY 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
DB 121 EOTKRLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEESRLSAVYNNLHCLRDSSH 180
OY 181 KIDNYLKLKCRRIIHNHNC 199
DB 181 KIDNYLKLKCRRIIHNHNC 199
RESULT 6
ABU09878 standard; protein; 199 AA.
ID ABU09878
XX AC ABU09878;
XX DT 11-AUG-2003 (first entry)
XX DE Human prolactin G129R substitution mutant.
XX
XX Human prolactin; antagonist; cancer cell proliferation; breast cancer;
KW prostate cancer; cellular apoptosis; mutant; mutein.
XX
XX Homo sapiens.
XX OS Synthetic.

XX dipeptidyl peptidase cleavage; antidiabetic; anorectic; antiinflammatory;
KM antiarteriosclerotic; tranquiliser; anticonvulsant; hypnotic;
KM gene therapy; metabolic disease; diabetes; obesity; inflammation;
KM atherosclerosis; nervous system disorder; anxiety; seizures;
KM sleep disorder; prolactin; human.
OS Homo sapiens.
XX WO2004078777-A2.
XX 16-SEP-2004.
XX PD
XX 04-MAR-2004; 2004WO-US006462.
XX PF
XX 04-MAR-2003; 2003US-00378094.
XX PR 28-AUG-2003; 2003WO-US026818.
XX PA (BIOR-) BIOREXIS PHARM CORP.
XX PI Sadeghi H, Prior CP, Balance DJ;
XX DR WPI; 2004-653689/63.
XX PT New modified polypeptides that are resistant to dipeptidyl peptidase
PT cleavage, useful for treating metabolic diseases (e.g. diabetes or
PT obesity), inflammation, atherosclerosis or nervous system disorders (e.g.
PT anxiety).
XX PS
XX PS Disclosure; SEQ ID NO 43; 125pp; English.
XX CC This invention relates to a novel polypeptide molecule modified to
CC contain at least one additional amino acid at the N-terminal end that
CC substantially protects the polypeptide molecule from dipeptidyl peptidase
CC cleavage, where the modified polypeptide substantially retains
CC polypeptide activity. The invention may be useful for the production of
CC compounds with an antidiabetic, anorectic, antiinflammatory,
CC antiarteriosclerotic, tranquiliser, anticonvulsant or hypnotic activity.
CC In addition, the invention may be useful for gene therapy. The compounds
CC may be useful for treating metabolic diseases (for example diabetes or
CC obesity), inflammation, atherosclerosis and nervous system disorders,
CC such as anxiety, seizures and sleep disorders. The present sequence is
CC that of a polypeptide derived from a human protein which is related to
CC the invention.
XX CC
XX SQ Sequence 199 AA;
SQ Query Match 99.3%; Score 1035; DB 8; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 LPICGGAARCCVTLRDLPDRAVLSHYIHNISSMFSEDFKRYTHGCGFTTKAINSCHT 60
DB 1 LPICGGAARCCVTLRDLPDRAVLSHYIHNISSMFSEDFKRYTHGCGFTTKAINSCHT 60
OY 61 SSLAPBEKEAQQONNOQDFLSIYSIRSNMEPLVHTVTEKGMQEAPEAIIISCAVEIE 120
DB 61 SSLAPBEKEAQQONNOQDFLSIYSIRSNMEPLVHTVTEKGMQEAPEAIIISCAVEIE 120
OY 121 EOTKLLBRLMELIVSQVPEKENEIYPVWSGLPSIQMADESSRLSAYYNLLHCURDSH 180
DB 121 EOTKLLBRLMELIVSQVPEKENEIYPVWSGLPSIQMADESSRLSAYYNLLHCURDSH 180
OY 181 KIDNTYLLKLCRIIHNHNC 199
DB 181 KIDNTYLLKLCRIIHNHNC 199
RESULT 9
ID AAW92258 standard; protein; 200 AA.
XX AAW92258;
AC AAW92258;

XX 08-JUN-1999 (first entry)
DT Human anti-angiogenic peptide hPRL Met-1Cys199.
XX DE
XX XX
XX Human; anti-angiogenic; prolactin; placental lactogen; hPL; angiogenesis;
KM growth hormone; hGH; hGH-V; capillary endothelial cell proliferation;
KM placental vasculatisation; pregnancy; treatment; angiogenic disease;
KM tumour; inhibitor; malignant; angiofibroma; arteriovenous malformation;
KM arthritis; atherosclerotic plaques; corneal graft neovascularisation;
KM wound healing; proliferative retinopathy; macular degeneration; trachoma;
KM granuloma; glaucoma; ocular; uveitis; fracture; Osler-Weber syndrome;
KM psoriasis; fibrioplasia; scleroderma; Kaposi's sarcoma; vascular adhesion;
KM ulcer; leukaemia; reproductive disorder; contraceptive agent;
KM gene therapy; pre-eclampsia; intrauterine growth retardation;
KM placental dysfunction.
XX KM
XX OS Homo sapiens.
XX OS
XX PN WO9851323-A1.
XX PD 19-NOV-1998.
XX PD
XX 12-MAY-1998; 98WO-US009691.
XX PE
XX 13-MAY-1997; 97US-0046394P.
XX PR
XX PA (REGC) UNIV CALIFORNTA.
XX PI Weiner RJ, Martial JA, Struman I, Taylor R;
XX DR WPI; 1999-045192/04.
XX DR N-PSDB; AAX01694.
XX PT New anti-angiogenic peptides - comprise N-terminal fragments of human
PT placental lactogen, human growth hormone, growth hormone variant or human
PT prolactin.
XX PT
XX PS Example 3; Page 43-44; 87pp; English.
XX PS
XX CC This invention describes novel human anti-angiogenic peptides derived
CC from 10 to 150 consecutive amino acids selected from the N-terminal end
CC of human placental lactogen (hPL), human growth hormone (hGH), growth
CC hormone variant (hGH-V), or human prolactin. Such peptides (i) inhibit
CC capillary endothelial cell proliferation and organisation (ii) inhibit
CC angiogenesis in chick chorioallantoic membrane and (iii) binds to at
CC least one specific receptor which does not bind an intact full length
CC hGH, hPL, prolactin or hGH-V. The invention also describes a method for
CC diagnosing a probable abnormality of placental vasculatisation during
CC pregnancy. The peptides can be used for treating an angiogenic disease in
CC a subject, for inhibiting tumour formation or growth in a patient or for
CC modulating vasculatisation of a patient's placenta. In particular, the
CC peptides can be used for preventing or treating e.g. malignant tumours,
CC angiofibroma, arteriovenous malformation, arthritic such as rheumatoid
CC arthritis, atherosclerotic plaques, corneal graft neovascularisation,
CC delayed wound healing, proliferative retinopathy such as diabetic
CC retinopathy, macular degeneration, granulation such as those occurring
CC in haemophilic joints, inappropriate vasculatisation in wound healing
CC such as hypertrophic scars or keloid scars, neovascular glaucoma, ocular
CC tumour, uveitis, non-union fractures, Osler-Weber syndrome, psoriasis,
CC pyogenic glaucoma, retrolental fibroplasia, scleroderma, solid tumours,
CC Kaposi's sarcoma, trachoma, vascular adhesions, chronic varicose ulcers,
CC leukaemia, and reproductive disorders such as follicular and luteal cysts
CC and chorioncarcinoma. They can also be used as contraceptive agents, DNA
CC encoding the peptides can be used in gene therapy. The measurement of
CC abnormal levels of N-terminal fragments of hGH, hGH-V, prolactin or hPL
CC can be used in assays for impairment of vascular development associated
CC with pre-eclampsia, intrauterine growth retardation, and placental
CC dysfunction
XX CC
XX SQ Sequence 200 AA;
SQ Query Match 99.3%; Score 1035; DB 2; Length 200;

Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFIITKAINSCHT 60
DB 2 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFIITKAINSCHT 61
QY 61 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWEPYHLVTEVRGMOEAPALISKAVEIE 120
DB 62 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWEPYHLVTEVRGMOEAPALISKAVEIE 121
QY 121 EGTKRLERMEILVSGVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 180
DB 122 EGTKRLERMEILVSGVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 181
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 182 KIDNYLKLKCRRIHNNNC 200

RESULT 10

ADQ38217
ID ADQ38217 standard; protein; 200 AA.

AC ADQ38217;

DT 23-SEP-2004 (first entry)

DE Recombinant mature human prolactin protein.

KW cytostatic; prolactin; antagonist; prolactin receptor; mutation; cancer;

KM breast cancer; leukaemia; lactation; prolactinoma;

KW hyperprolactinemic condition; human.

OS Homo sapiens.

PN WO2004054516-A2.

PD 01-JUL-2004.

PF 12-DEC-2003; 2003WO-US039646.

PR 13-DEC-2002; 2002US-043370P.

PA (OHIS) UNITV OHIO STATE.

PI Brooks CL, Peterson FC;

DR WPI; 2004-487994/46.

PT New modified human prolactin molecule exhibiting antagonist activity,
PT binding to prolactin receptor through site 1, and having diminished
PT binding through site 2, useful for treating cancer such as breast cancer
PT or leukemia.

PS Disclosure; Fig 5; 95pp; English.

CC The invention relates to a modified human prolactin molecule (I)
CC exhibiting antagonist activity, capable of binding to prolactin receptor
CC through site 1, having greatly diminished binding through site 2, where
CC (I) comprises one or more mutation in the region that contains amino
CC acids residues 41-57, 94-110 or 160-173 of the human prolactin, and the
CC mutation is by deletions, substitutions, and insertions. (I) is useful
CC for treating cancer, which involves administering (I), where the cancer
CC is breast cancer or leukemia. (I) is useful for reducing or suppressing
CC lactation, for inhibiting or decreasing the activity of endogenous
CC prolactins, and for treating or preventing prolactinoma
CC (hyperprolactinemic condition). (I) exhibits antagonist activity, and
CC binds to prolactin receptor through site 1 not through site 2. This
CC sequence corresponds to the mature prolactin protein minus the signal
CC sequence but with a Met residue attached at the N-terminus.

XX Sequence 200 AA;

Query Match 99.3%; Score 1035; DB 8; Length 200;
Best Local Similarity 99.5%; Pred. No. 1.8e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFIITKAINSCHT 60
DB 2 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFIITKAINSCHT 61
QY 61 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWEPYHLVTEVRGMOEAPALISKAVEIE 120
DB 62 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWEPYHLVTEVRGMOEAPALISKAVEIE 121
QY 121 EGTKRLERMEILVSGVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 180
DB 122 EGTKRLERMEILVSGVHPETKENETYPVWSGLPSIQMADESRSLSAAYNLLHCLRRDSH 181
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 182 KIDNYLKLKCRRIHNNNC 200

RESULT 11

AAR05231
ID AAR05231 standard; protein; 227 AA.

AC AAR05231;

DT 25-MAR-2003 (revised)

DT 03-AUG-1990 (first entry)

DE AA sequence of human prolactin (HP) as encoded by recombinant DNA.

KW Human prolactin (HP); plasmid pTP100; plasmid pDR720; plasmid pLP100.

OS Homo sapiens.

PN JP02000445-A.

PD 05-JAN-1990.

PF 14-DEC-1988; 88JP-00315317.

PR 25-DEC-1987; 87JP-00331244.

PA (SHIK-) SHIKISHIMA BOSEKI K.

DR WPI; 1990-047987/07.

PT Human prolactin producing recombinant DNA - in which promoter, Shine-
PT Dalgarno sequence and translation initiation codon are integrated.

PS Disclosure; Fig 1; 15pp; Japanese.

CC Also new are bacteria (E. coli) expressing it which contain its encoding
CC DNA, and the prodn. of it by their culture. Large amts. of it can be
CC produced recombinantly. (Updated on 25-MAR-2003 to correct PF field.)
CC (Updated on 25-MAR-2003 to correct PR field.)

XX Sequence 227 AA;

Query Match 99.3%; Score 1035; DB 2; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.1e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFIITKAINSCHT 60
DB 29 LPICGGAARCCVTLRDLFDRAVVLSHYIHNLSSEMFSEFDRKRYTHGRGFIITKAINSCHT 88
QY 61 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWEPYHLVTEVRGMOEAPALISKAVEIE 120
DB 89 SSLATPEDKEQAQQNNQKDFLSLIVSIIRSNWEPYHLVTEVRGMOEAPALISKAVEIE 148

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OY 121 EOTKRLERMLIVSQVHPETKENETYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 180
DB 149 EOTKRLLEGMLIVSQVHPETKENETYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 208
OY 181 KIDNYLKLKCRITIHNNNC 199
DB 209 KIDNYLKLKCRITIHNNNC 227

RESULT 12
AAG78336
ID AAG78336 standard; protein; 227 AA.
AC AAG78336;
XX
XX 22-JAN-2002 (first entry)
DT
XX
XX Human prolactin (hPRL).
XX Breast cancer; apoptosis inducer; positive immunomodulator domain;
XX immune response; cytostatic; T lymphocyte cytotoxicity enhancer;
XX STAT phosphorylation inhibitor; prolactin antagonist; interleukin-2;
XX IL-2; interferon gamma; IFN gamma; IL-12.
XX
XX Homo sapiens.
XX
XX MO200170985-A2.
XX
XX 27-SEP-2001.
XX
XX 23-MAR-2001; 2001WO-US009284.
XX
XX 23-MAR-2000; 2000US-0191457P.
XX
XX (GRB-) GREENVILLE HOSPITAL SYSTEM.
XX
XX Chen WY, Wagner TE;
XX
XX WPI; 2001-611504/70.
XX
XX Novel polypeptide for treating cancer comprises a receptor antagonizing
XX domain which also functions as an apoptosis domain, such as the prolactin
XX antagonist domain, and a positive immunomodulator domain.
XX
XX Claim 20; Page 47; 47pp; English.
XX
XX This sequence represents human prolactin (hPRL), which may be used to create
XX the receptor antagonist domain of the protein of the invention. The
XX specification describes a novel protein comprising a receptor
XX antagonizing domain (having a fully defined sequence as given in the
XX specification, or its conservative variant) and a positive
XX immunomodulator domain. The object of the invention is to provide a
XX medicament that is capable of interfering with the prolactin signalling
XX of a cancer cell, a pharmaceutical composition comprising the protein,
XX and a carrier vehicle is described. A receptor antagonist domain is a
XX ligand that specifically binds to a receptor associated with a disorder
XX like cancer, and can be an apoptosis-promoting domain. A positive
XX immunomodulator domain is one that augments an immune response, preferably
XX against the target cell, e.g. interleukin (IL)-2, interleukin (IL)-12 and
XX interferon (IFN) gamma. The protein has cytostatic activity and is useful
XX for treating cancer in a patient. The protein is an apoptosis inducer, a
XX T lymphocyte cytotoxicity enhancer, a signal transducer and activator of
XX transcription (STAT) phosphorylation inhibitor and a prolactin
XX antagonist. The targeted therapy approach is designed to provide
XX dramatically decreased systemic concentrations of positive
XX immunomodulator domain, e.g. IL-2, thereby reducing its toxicity in vivo
XX
XX Sequence 227 AA;
XX
XX Query Match 99.3%; Score 1035; DB 4; Length 227;
XX Best Local Similarity 99.5%; Pred. No. 2,1e-92;
XX Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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OY 1 LPICPGGAARCOVTLRDLFPRAVVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 29 LPICPGGAARCOVTLRDLFPRAVVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 88
OY 61 SSLATPEDEKQAOQOMQKDFLSLIVSLRSWNEPLYHLVTEVRGMOEAPKALSKAVEIE 120
DB 89 SSLATPEDEKQAOQOMQKDFLSLIVSLRSWNEPLYHLVTEVRGMOEAPKALSKAVEIE 148
OY 121 EOTKRLERMLIVSQVHPETKENETYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 180
DB 149 EOTKRLLEGMLIVSQVHPETKENETYPVWSGLPSLQMADEESRLSAVYNLLHCLRDSH 208
OY 181 KIDNYLKLKCRITIHNNNC 199
DB 209 KIDNYLKLKCRITIHNNNC 227

RESULT 13
AAU28057
ID AAU28057 standard; protein; 227 AA.
AC AAU28057;
XX
XX 18-DEC-2001 (first entry)
DT
XX
XX Novel human secretory protein, Seq ID No 226.
XX
XX Human; secreted protein; arthritis; Crohn's disease; sepsis; shock;
XX ischaemia-reperfusion injury; haematopoiesis; cancer; neuropathy;
XX transgenic animal; Alzheimer's disease; Parkinson's disease; burn;
XX amyotrophic lateral sclerosis; platelet disorder; thrombocytopenia;
XX ulcer; osteoporosis; bone degenerative disorder; periodontal disease;
XX gut protection; lung; liver fibrosis; immune deficiency; infection;
XX severe combined immunodeficiency; SCID; autoimmune disorder; allergy;
XX multiple sclerosis; rheumatoid arthritis; diabetes mellitus; asthma;
XX fertility; analgesic; pain; antigen.
XX
XX Homo sapiens.
XX
XX MO200166689-A2.
XX
XX 13-SEP-2001.
XX
XX 05-MAR-2001; 2001WO-US004942.
XX
XX 07-MAR-2000; 2000US-00519705.
XX
XX 19-MAY-2000; 2000US-00574454.
XX
XX 17-JUN-2000; 2000US-00596193.
XX
XX 14-JUL-2000; 2000US-00616847.
XX
XX 19-SEP-2000; 2000US-00665363.
XX
XX 20-OCT-2000; 2000US-00693267.
XX
XX (HYSE-) HYSEQ INC.
XX
XX Tang YT, Liu C, Asundi V, Xu C, Wehrman T, Ren F, Ma Y, Zhou P;
XX Zhao QA, Yang Y, Drmanac RT, Zhang J, Chen R, Xue AJ, Wang J;
XX
XX WPI; 2001-589934/66.
XX
XX N-PSDB; AAS44957.
XX
XX Novel polypeptides and nucleic acids obtained from cDNA libraries
XX prepared from various human tissues, for diagnosis and treatment of
XX cancer, neurological, inflammatory, and autoimmune disorders.
XX
XX Example 3; SEQ ID NO 226; 107pp; English.
XX
XX The invention relates to novel isolated human secreted polypeptides (I)
XX and polynucleotides (II). (I) and (II) are useful for treating
XX inflammatory conditions such as arthritis, nephritis, Crohn's disease,
XX ischaemia-reperfusion injury, shock, sepsis, immune responses, and is
XX involved in increasing haematopoiesis, stem cell survival, bone growth
XX and remodeling. (I), (II) and modulators of (II) are useful for
```


prophylaxis or treatment of one or more cancers. (11) is also useful for creating transgenic animals useful for studying the in vivo activities of the polypeptide as well as for studying modulators of the polypeptides. (1) induces the proliferation of neural cells and regeneration of nerve and brain tissue and is useful for the treatment of central and peripheral nervous system diseases and neuropathies, such as Alzheimer's, Parkinson's disease, Huntington's disease, and amyotrophic lateral sclerosis. In addition, (1) is involved in chemotactic or chemokinetic activity, regulation of haematopoiesis and is useful for treating myeloid or lymphoid cell disorders, platelet disorders such as thrombocytopenia and for regeneration of bone, cartilage, tendon, ligament and/or nerve tissue growth, and in tissue repair, healing of burns, incisions, ulcers, for treating osteoporosis, osteoarthritis, bone degenerative disorders, or periodontal disease. Furthermore, (1) is also useful for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues, various immune deficiencies and disorders including severe combined immunodeficiency (SCID), bacterial or fungal infections, autoimmune disorders e.g. multiple sclerosis, rheumatoid arthritis, diabetes mellitus, myasthenia gravis, allergic reactions and conditions, such as asthma or other respiratory problems. In addition, (1) affects biorhythms or circadian cycles of rhythms, fertility, metabolism, catabolism, anabolism, storage or elimination of dietary fat, lipid, protein, carbohydrate, vitamins, minerals, provides anaesthetic effects or other pain reducing effects, immunoglobulin like activity and can act as an antigen in a vaccine composition to raise an immune response. AAU8020-AAU28395 represent novel human secreted protein amino acid sequences of the invention

XX Sequence 227 AA;

Query Match 99.3%; Score 1035; DB 4; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.1e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPTCPGGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 60
DB 29 LPTCPGGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 88
QY 61 SSLATPEDEKQAQNNQKDFLSIVLSILSWNEPLVHLVTEVGMQAEPAIISKAVEIE 120
DB 89 SSLATPEDEKQAQNNQKDFLSIVLSILSWNEPLVHLVTEVGMQAEPAIISKAVEIE 148
QY 121 EGTKRLLRMELIVSOVHPETKENEIYPWWSGIPSLQMADEBSRLSAYVNLHCLRRDSH 180
DB 149 EGTKRLLRMELIVSOVHPETKENEIYPWWSGIPSLQMADEBSRLSAYVNLHCLRRDSH 208
QY 181 KIDNYLKLKCRTHNNNC 199
DB 209 KIDNYLKLKCRTHNNNC 227

RESULT 14

ADD48810 ADD48810 standard; protein; 227 AA.

XX ADD48810;

DT 02-DEC-2004 (revised)
XX 29-JAN-2004 (first entry)

DE Human Protein CAA38264, SEQ ID NO 14520.

XX Human; pain; neuronal tissue; gene therapy;
KW spinal segmental nerve injury; chronic constriction injury; CCI;
KW spared nerve injury; SNI; Chung.

XX Homo sapiens.
OS Unidentified.

PN MO2003016475-A2.

XX 27-FEB-2003.

XX

PF 14-AUG-2002; 2002MO-US025765.

XX 14-AUG-2001; 2001US-0312147P.

PR 01-NOV-2001; 2001US-0346382P.

PR 26-NOV-2001; 2001US-0333347P.

XX (GENO) GEN HOSPITAL CORP.

PA (FARB) BAYER AG.

PI Woolf C, D'urso D, Befort K, Costigan M;

DR MPI; 2003-268312/26.

DB GENBANK; CAA38264.

PT New composition comprising two or more isolated polypeptides, useful for preparing a medicament for treating pain in an animal.

XX Example 1; Page; 1017p; English.

XX The invention discloses a composition comprising two or more isolated rat or human polynucleotides or a polynucleotide which represents a fragment, derivative or allelic variation of the nucleic acid sequence. Also claimed are a vector comprising the novel polynucleotide, a host cell comprising the vector, a method for identifying a nucleotide sequence which is differentially regulated in an animal subjected to pain and a kit to perform the method, an array, a method for identifying an agent that increases or decreases the expression of the polynucleotide sequence that is differentially expressed in neuronal tissue of a first animal subjected to pain, a method for identifying a compound which regulates the expression of a polynucleotide sequence which is differentially expressed in an animal subjected to pain, a method for identifying a compound that regulates the activity of one or more of the polynucleotides, a method for producing a pharmaceutical composition, a method for identifying a compound or small molecule that regulates the activity in an animal of one or more of the polypeptides given in the specification, a method for identifying a compound useful in treating pain and a pharmaceutical composition comprising the one or more polypeptides or their antibodies. The polynucleotide or the compound that modulates its activity is useful for preparing a medicament for treating pain (e.g. spinal segmental nerve injury (Chung), chronic constriction injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene therapy). The sequence presented is a human protein (described in Table 3 of the specification) which is differentially expressed during pain. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic form directly from WIGO at ftp.wigo.int/pub/published_pct_sequences.

XX Sequence 227 AA;

Query Match 99.3%; Score 1035; DB 7; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.1e-92;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPTCPGGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 60
DB 29 LPTCPGGAARCOVTLTDLFDRAVVLSHYTHNLSSEMFSEPDKRYTHGRGFTTAINSCHT 88
QY 61 SSLATPEDEKQAQNNQKDFLSIVLSILSWNEPLVHLVTEVGMQAEPAIISKAVEIE 120
DB 89 SSLATPEDEKQAQNNQKDFLSIVLSILSWNEPLVHLVTEVGMQAEPAIISKAVEIE 148
QY 121 EGTKRLLRMELIVSOVHPETKENEIYPWWSGIPSLQMADEBSRLSAYVNLHCLRRDSH 180
DB 149 EGTKRLLRMELIVSOVHPETKENEIYPWWSGIPSLQMADEBSRLSAYVNLHCLRRDSH 208
QY 181 KIDNYLKLKCRTHNNNC 199
DB 209 KIDNYLKLKCRTHNNNC 227

RESULT 15

ADQ38216 ADQ38216 standard; protein; 227 AA.

XX AD038216;
 AC 23-SEP-2004 (first entry)
 XX
 XX
 DE Precursor human prolactin protein.
 XX
 KM cytosolic; prolactin; antagonist; prolactin receptor; mutation; cancer;
 KM breast cancer; leukemia; lactation; prolactinoma;
 KM hyperprolactinemic condition.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Peptide 1..28
 FT /note= "signal peptide"
 FT Protein 29..227
 FT /note= "mature protein"
 XX
 FN WC2004054516-A2.
 XX
 PD 01-JUL-2004.
 PD
 PF 12-DEC-2003; 2003WO-US039646.
 PF
 PR 13-DEC-2002; 2002US-0433370P.
 PR
 PA (OHIS) UNIV OHIO STATE.
 PA
 PI Brooks CL, Peterson FC;
 PI
 XX WPI; 2004-487994/46.
 XX N-PSDB; AD038215.
 DR GENBANK; NP_000939.
 DR
 XX
 PT New modified human prolactin molecule exhibiting antagonist activity,
 PT binding to prolactin receptor through site 1, and having diminished
 PT binding through site 2, useful for treating cancer such as breast cancer
 PT or leukemia.
 PT
 PS Disclosure; Fig 4; 95pp; English.
 PS
 XX
 CC The invention relates to a modified human prolactin molecule (I)
 CC exhibiting antagonist activity, capable of binding to prolactin receptor
 CC through site 1, having greatly diminished binding through site 2, where
 CC (I) comprises one or more mutation in the region that contains amino
 CC acids residues 41-57, 94-110 or 160-173 of the human prolactin, and the
 CC mutation is by deletions, substitutions, and insertions. (I) is useful
 CC for treating cancer, which involves administering (I), where the cancer
 CC is breast cancer or leukemia. (I) is useful for reducing or suppressing
 CC lactation, for inhibiting or decreasing the activity of endogenous
 CC prolactin, and for treating or preventing prolactinoma
 CC (hyperprolactinemic condition). (I) exhibits antagonist activity, and
 CC binds to prolactin receptor through site 1 not through site 2. This
 CC sequence corresponds to the precursor human prolactin protein.
 CC
 XX
 SQ Sequence 227 AA;
 SQ
 Query Match 99.3%; Score 1035; DB 8; Length 227;
 Best Local Similarity 99.5%; Pred. No. 2.1e-92;
 Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 LPICGGAARCCVTLRDLFDRAVVISLHYIHNLISSEMFSEFDRKRYTHGRGFITKAINSCHT 60
 DB 29 LPICGGAARCCVTLRDLFDRAVVISLHYIHNLISSEMFSEFDRKRYTHGRGFITKAINSCHT 88
 QY 61 SSLATPEDEKQAOQNNQDFSLIVSILRSWNEPLYHLVTEVRGMOEAPATLSKAVEIE 120
 DB 89 SSLATPEDEKQAOQNNQDFSLIVSILRSWNEPLYHLVTEVRGMOEAPATLSKAVEIE 148
 QY 121 EOTKRLLEEMELIVSQVHPETKENIYPVWSGLPSLOMADEBSRLSAYYNLHLCLRRDSH 180
 DB 149 EOTKRLLEEMELIVSQVHPETKENIYPVWSGLPSLOMADEBSRLSAYYNLHLCLRRDSH 208

QY 181 KIDNYLKLKLCRIHHNNC 199
 DB 209 KIDNYLKLKLCRIHHNNC 227

Search completed: January 6, 2006, 14:28:13
 Job time : 198 secs

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OM protein - protein search, using SW model

Run on: January 6, 2006, 14:21:29 ; Search time 43 Seconds
(without alignments)
445,282 Million cell updates/sec

Title: US-09-815-306a-34

Perfect score: 1042

Sequence: 1 LPICPGAGARCVTLRLDLD.....HKIDNYLKLKCRITHHNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1035	99.3	227	1	LCHU
2	1023	98.2	228	2	A61402
3	879	84.4	199	2	S15131
4	869	83.4	229	1	LCPG
5	868	83.3	199	1	LCHO
6	859	82.4	229	2	JC4631
7	853	81.9	199	2	PN0128
8	789	75.7	229	1	LCBO
9	788	75.6	229	1	LCSH
10	788	75.6	229	2	I83982
11	782.5	75.1	198	1	A60620
12	764	73.3	175	2	S18882
13	762	73.1	229	2	A60972
14	746	70.6	229	2	A61133
15	725	70.0	199	2	JS0430
16	682.5	65.5	207	2	A60969
17	659	63.2	226	1	LCRT
18	649	63.2	226	2	A49159
19	613	58.8	228	1	LCMS
20	593.5	57.0	200	2	S34604
21	486	46.6	134	2	IS1233
22	460	44.1	236	2	A37930
23	456.5	43.8	221	2	A41407
24	435	41.7	236	2	A40143
25	416.5	40.0	238	2	B36284
26	415.5	39.9	267	2	A34078
27	409.5	39.3	222	2	A26489
28	394.5	37.9	221	2	A25951
29	387	37.1	238	2	A31417

30	363	34.8	239	2	S04966	prolactin-like pro
31	362.5	34.8	223	2	A49160	placental lactogen
32	362	34.7	234	2	A40919	prolactin-like pro
33	361	34.6	237	2	S14722	hypothetical prote
34	359.5	34.5	244	2	A22722	proliferin-related
35	359	34.5	224	2	A40062	lactogen I precurs
36	350	33.6	213	2	B34078	prolactin-related
37	332.5	31.9	230	2	A37399	lactogen I precurs
38	315.5	30.3	227	2	A24911	prolactin-like pro
39	308	29.6	224	2	A05086	proliferin I precu
40	308	29.6	224	2	S48671	proliferin - mouse
41	307	29.5	224	2	S05648	proliferin 3 - mou
42	304	29.2	209	2	S30541	prolactin precurs
43	302.5	29.0	212	2	IS1275	prolactin precurs
44	302	29.0	224	2	A21559	proliferin 2 precu
45	281.5	27.0	239	2	A46603	decidual prolactin

ALIGNMENTS

RESULT 1

LCHU

prolactin precursor [validated] - human

C.Species: Homo sapiens (man)

C.Date: 30-Jun-1979 #sequence revision 23-Oct-1981 #text change 09-Jul-2004

C.Accession: A90998; A92318; A28867; A92762; A92177; A01505

R.Trung, A.T.; Duez, C.; Belayev, A.; Renard, A.; Picot, R.; Bell, G.I.; Martial, J.A.

EMBO J. 3, 429-437, 1984

A.Title: Isolation and characterization of the human prolactin gene.

A.Reference number: A90998; MUID:84182507; PMID:6325171

A.Accession: A90998

A.Molecule type: DNA

A.Residues: 1-227 <TRU>

A.Cross-references: UNIPROT:P01236; UNIPARC:UPI000001C13

R.Cooke, N.E.; Colt, D.; Shine, J.; Baxter, J.D.; Martial, J.A.

J. Biol. Chem. 256, 4007-4016, 1981

A.Title: Human prolactin: cDNA structural analysis and evolutionary comparisons.

A.Reference number: A92318; MUID:81168179; PMID:6260780

A.Accession: A92318

A.Molecule type: mRNA

A.Residues: 1-227 <COO>

A.Cross-references: UNIPARC:UPI000001C13; GB:V00566; GB:J00299; NID:G34210; PIDN:CAA23

J. Takahashi, H.; Nabeshima, Y.; Nabeshima, Y.; Ogata, K.; Takeuchi, S.

R. Biochem. 95, 1491-1499, 1984

A.Title: Molecular cloning and nucleotide sequence of DNA complementary to human decidu

A.Reference number: A28867; MUID:84264464; PMID:6146607

A.Accession: A28867

A.Molecule type: mRNA

A.Residues: 1-205, 'H', 207-227 <TK>

A.Cross-references: UNIPARC:UPI0000173453; EMBL:M29386

A.Note: the authors translated the codon CAT for residue 206 as Asp

R.Merzvetov, N.P.; Golovin, S.Y.; Zelenin, S.M.; Morozova, T.V.; Karginov, V.A.; Chekh

Biorg. Khim. 13, 1687-1690, 1987

A>Title: Synthesis, cloning and sequencing of cDNA complementary to mRNA of prolactin f

A.Reference number: PNO089; MUID:88221681; PMID:3450284

A.Accession: PNO089

A.Molecule type: mRNA

A.Residues: 45-227 <MER>

A.Cross-references: UNIPARC:UPI0000173454

A.Experimental source: pituitary gland

A.Note: the authors translated the codon AAC for residue 15 as Asp

J. Shome, B.; Parlow, A.F.

J. Clin. Endocrinol. Metab. 45, 1112-1115, 1977

A>Title: Human pituitary prolactin (hPRL): the entire linear amino acid sequence.

A.Reference number: A92762; MUID:78046207; PMID:925136

A.Accession: A92762

A.Molecule type: protein

A.Residues: 29-109, 'VS', 112, 'L', 115-132, 'X', 134-171, 'D', 173-189, 'SF', 192-227 <SH>

A.Cross-references: UNIPARC:UPI0000173455; UNIPARC:UPI0000173456

R.Jacobs, J.W.; Niall, H.D.

J. Biol. Chem. 250, 3629-3636, 1975

A>Title: High sensitivity automated sequence determination of polypeptides.

A:Reference number: A92177; MUID:75151509; PMID:1126929
A:Accession: A92177
A:Molecule type: Protein
A:Residues: 29-52, 'L' <JAC>
A:Cross-references: UNIPARC:UPI0000173457
C:Genetics:
A:Gene: GDB:PRL
A:Cross-references: GDB:119517; OMIM:176760
A:Map position: 6p22.2-6p22.1
A:Introns: 9/3; 68/3; 104/3; 164/3
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta
F:1-28/Domains: signal sequence #status predicted <SIG>
F:29-227/Product: prolactin #status experimental <MAT>
F:32-39, 86-202, 219-227/Dissulfide bonds: #status predicted

Query Match 99.3%; Score 1035; DB 1; Length 227;
Best Local Similarity 99.5%; Pred. No. 2.5e-75;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAACQVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
Db 29 LPICGGAACQVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 88
Qy 61 SSLATPEDEKQAQGNQKDFSLIVSILRSWNEPLVHLYTEVRGQEAPEALISKAIVE 120
Db 89 SSLATPEDEKQAQGNQKDFSLIVSILRSWNEPLVHLYTEVRGQEAPEALISKAIVE 148
Qy 121 EGTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYNNLHCLRRDSH 180
Db 149 EGTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYNNLHCLRRDSH 208
Qy 181 KIDNYLKILKCRITHHNNC 199
Db 209 KIDNYLKILKCRITHHNNC 227

RESULT 2
A:Reference number: A61402
A:Accession: A61402
A:Molecule type: prolactin precursor, placental (clone 204) - human
C:Species: Homo sapiens (man)
C:Date: 09-Sep-1994 #sequence_revision 09-Sep-1994 #text_change 16-Feb-1997
C:Accession: A61402
R:Hitachi, Y.; Tatsumi, K.; Shiozawa, M.; Aiso, S.; Fukasawa, T.; Yasuda, K.; Miyai, K.
Mol. Cell. Endocrinol. 75, 71-80, 1991
A:Title: A placenta-specific 5' non-coding exon of human prolactin.
A:Reference number: A61402; MUID:91267286; PMID:2050267
A:Accession: A61402
A:Status: preliminary; not compared with conceptual translation
A:Molecule type: mRNA
A:Residues: 1-228 <HIR>
A:Cross-references: UNIPARC:UPI00001765D2
C:Superfamily: prolactin
C:Keywords: alternative splicing
F:87-203, 220-228/Dissulfide bonds: #status predicted

Query Match 98.2%; Score 1023; DB 2; Length 228;
Best Local Similarity 99.0%; Pred. No. 2.2e-74;
Matches 197; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1 LPICGGAACQVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
Db 30 LPICGGAACQVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 89
Qy 61 SSLATPEDEKQAQGNQKDFSLIVSILRSWNEPLVHLYTEVRGQEAPEALISKAIVE 120
Db 90 SSLATPEDEKQAQGNQKDFSLIVSILRSWNEPLVHLYTEVRGQEAPEALISKAIVE 149
Qy 121 EGTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYNNLHCLRRDSH 180
Db 150 EGTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYNNLHCLRRDSH 209
Qy 181 KIDNYLKILKCRITHHNNC 199

Db 210 KIDNYLKILKCRITHHNNC 228

RESULT 3
A:Reference number: A51531
A:Accession: A51531
A:Molecule type: prolactin - Arabian camel
C:Species: Camelus dromedarius (Arabian camel)
C:Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 09-Jul-2004
A:Accession: A51531; A60513
R:Martinat, N.; Hue, J.C.; Neopoulou, C.; Combarrous, Y.; Pernollet, J.C.
Biochim. Biophys. Acta 1077, 339-345, 1991
A:Title: Determination of the primary and secondary structures of the dromedary (Camelus
A:Reference number: A51531; MUID:91230144; PMID:2029533
A:Accession: A51531
A:Status: preliminary
A:Molecule type: protein
A:Residues: 1-199 <MAR>
A:Cross-references: UNIPROT:P22393; UNIPARC:UPI000013223E
R:Martinat, N.; Anouassi, A.; Hue, J.C.; Pernollet, J.C.; Combarrous, Y.
Comp. Biochem. Physiol. B 97, 667-674, 1990
A:Title: Purification and characterization of glycosylated and non-glycosylated forms of
A:Reference number: A60513; MUID:91199560; PMID:2085952
A:Accession: A60513
A:Molecule type: protein
A:Residues: 1-40 <MA2>
A:Cross-references: UNIPARC:UPI00001765D4
C:Superfamily: prolactin
C:Keywords: anterior pituitary; hormone; lactation; placenta

Query Match 84.4%; Score 879; DB 2; Length 199;
Best Local Similarity 80.9%; Pred. No. 5.7e-63;
Matches 161; Conservative 22; Mismatches 16; Indels 0; Gaps 0;

Qy 1 LPICGGAACQVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
Db 1 LPICGGAACQVTLRDLFDRVAVLSHYIHNLSSMFSEFDRKRYTHGFGFTTKAINSCHT 60
Qy 61 SSLATPEDEKQAQGNQKDFSLIVSILRSWNEPLVHLYTEVRGQEAPEALISKAIVE 120
Db 61 SSLATPEDEKQAQGNQKDFSLIVSILRSWNEPLVHLYTEVRGQEAPEALISKAIVE 120
Qy 121 EGTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYNNLHCLRRDSH 180
Db 121 EGTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADESSRLSAYNNLHCLRRDSH 180
Qy 181 KIDNYLKILKCRITHHNNC 199
Db 181 KIDNYLKILKCRITHHNNC 199

RESULT 4
A:Reference number: A60971
A:Accession: A60971
A:Molecule type: prolactin precursor - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 24-Apr-1984 #sequence_revision 27-Jun-1994 #text_change 09-Jul-2004
C:Accession: A60971; A60971; A01507
R:Schulz-Weilen, M.F.; Schmidt, B.; Moya, R.N.
Nucleic Acids Res. 17, 3295, 1989
A:Title: Nucleotide sequence of porcine prolactin cDNA.
A:Reference number: A60971; MUID:89263739; PMID:2726463
A:Accession: A60971
A:Molecule type: mRNA
A:Residues: 1-229 <SCH>
A:Cross-references: UNIPROT:P01238; UNIPARC:UPI000016C6E6; EMBL:X14068; NID:G2082; PIDN:
R:Kato, T.; Hirai, T.; Kato, T.
J. Mol. Endocrinol. 4, 135-142, 1990
A:Title: Molecular cloning of cDNA for porcine prolactin precursor.
A:Reference number: A60971; MUID:90262633; PMID:2344390
A:Accession: A60971
A:Molecule type: mRNA
A:Residues: 1-3, 'R', '5', 'X', '7-42', 'V', '44-229 <KAT>
A:Cross-references: UNIPARC:UPI000017345B

[illegible][illegible]

C:Species: Ovis montanus arteries, Ovis ammon arteries (domestic sheep)
C:Date: 24-Apr-1994 #sequence_revision 01-Aug-1997 #text_change 09-Jul-2004
A:Accession: I83963; S02100; J50200; A90050; A51770; S34736; A01509
R:Le Provost, F.; Leroux, C.; Martin, P.; Gaye, P.; Djiane, J.
Neuroendocrinology 60, 305-313, 1994
A>Title: Prolactin gene expression in ovine and caprine mammary gland.
A:Reference number: 160543; MUID:95059806; PMID:7969789
A:Accession: I83963
A>Status: preliminary; translated from GB/EMBL/DDBT
A:Molecule type: mRNA
A:Cross-references: UNIPROT:P01240; UNIPARC:UPI000016C4D7; EMBL:X76050; NID:G51264; PID:
A:Residues: 1-100, 'X', 102-229 <LEX>
A:Cross-references: UNIPROT:P01240; UNIPARC:UPI000016C4D7; EMBL:X76050; NID:G51264; PID:
R:Varmas, S.; Kwock, S.; Ehner, K.E.
Gene 77, 349-359, 1989
A>Title: Cloning and nucleotide sequence of ovine prolactin cDNA.
A:Reference number: J50200; MUID:89326152; PMID:266265
A:Accession: S02104
A:Molecule type: mRNA
A:Cross-references: UNIPARC:UPI0000132258; EMBL:X13483; NID:G1323; PIDN:CMAJ1839.1; PID:
R:Varmas, S.; Kwock, S.; Ehner, K.E.
Gene 77, 349-359, 1989
A>Title: Cloning and nucleotide sequence of an ovine prolactin cDNA.
A:Reference number: J50200; MUID:89326152; PMID:266265
A:Accession: J50200
A:Molecule type: mRNA
A:Residues: 'WVVWMSKRLTHQ', 2-39, 'D', 41-229 <VAR>
A:Cross-references: UNIPARC:UPI000016C4DF; GB:M27057; NID:G387875; PIDN:AAA31578.1; PID:
A:Experimental source: pituitary gland
R:Lilj, C.H.; Dixon, J.S.; Lo, T.B.; Schmidt, K.D.; Pankov, Y.A.
Arch. Biochem. Biophys. 141, 705-737, 1970
A>Title: Studies on pituitary lactogenic hormone, XXX. The primary structure of the sheep
A:Reference number: A50050; MUID:71091978; PMID:5497153
A:Accession: A50050
A:Molecule type: protein
A:Residues: 31-39, 'D', 41-117, 119-229 <LI1>
A:Cross-references: UNIPARC:UPI0000173464
R:Lilj, C.H.
Int. J. Pept. Protein Res. 8, 205-224, 1976
A>Title: Studies on pituitary lactogenic hormone. The primary structure of the porcine h
A:Reference number: A51770; MUID:76189476; PMID:1270193
A:Accession: A51770
A:Molecule type: protein
A:Residues: 31-39, 'D', 41-229 <LI2>
A:Cross-references: UNIPARC:UPI0000173465
R:Ritard, C.H.; Chavan, A.V.; Clemens, U.; Haley, B.E.
Arch. Biochem. Biophys. 304, 58-64, 1993
A>Title: Identification and characterization of a nucleotide binding site of ovine prola
A:Reference number: S34736; MUID:93312022; PMID:8322928
A:Accession: S34736
A:Molecule type: protein
A:Residues: 50-73 <TRA>
A:Cross-references: UNIPARC:UPI0000173466
C:Comment: This protein is a peptide hormone secreted by the anterior pituitary and has
C:Superfamily: prolactin
C:Keywords: anterior pituitary; glycoprotein; hormone; lactation; placenta
F:11-30/Domain: signal, sequence #status predicted <SIG>
F:31-229/Product: prolactin #status predicted <MOT>
F:34-41, 88-204, 221-229/Disulfide bonds: {cysteine} experimental
F:61/Binding site: carbohydrate (Asn) {covalent} #status predicted

Query Match 75.6%; Score 788; DB 1; Length 229;
Best Local Similarity 73.2%; Pred. No. 1.2e-55;
Matches 145; Conservative 23; Mismatches 30; Indels 0; Gaps 0;

2 PICGGGAARCOYTLTDLFDRAVLVSHYIHTLSSEMFSEDFKKRYTHRGFTTKAINSCHTS 61
|::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db PCPCPGNGPCGYSLRDLFDRAVMVSHYIHNLSSSEMFNEPDKRYAGKGFTIALNSCHTS 91

62 SLATBEDKQAQQAMOKAPLSILVISLSSWNEPYHLVTVERGMDEAEALISKAIVEIEE 121
|::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db SLPTBEDKQAQQOITHHEVLMSTLIGLRSWNPFLHVLTEVRGMKGVDALLSRAITEEE 151

```

Qy 122 QTKRLERMLIYSQVHPETKENIYPVWAGSLPSLQMADEBSKLSAYNLLHCLRRDSK 181
   | : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 152 ENKLLLEGMEIIFQGVIPGAKETEPYVWAGSLPSLQTKDEBARSAFYNNLLHCLRRDSK 211
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Qy 182 IDNYLKILKCRILHNNC 199
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 212 IDTYLKILKCRILYNNC 229
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

RESULT 10
183982
prolactin - goat
C:Species: Capra aegagrus hircus (domestic goat)
C:Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 09-Jul-2004
C:Accession: 183982
R:Le Provoost, F.; Leroux, C.; Martin, P.; Gaye, P.; Djiane, J.
N:Neuroendocrinology 60, 305-313, 1994
A>Title: Prolactin gene expression in ovine and caprine mammary gland.
A:Reference number: 160543; MUID:95059806; PMID:7969789
A:Accession: 183982
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-229 <LEK>
A:Cross-references: UNIPROT:Q28318; UNIPARC:UPI000016C3FA; EMBL:X76048; NID:G551229; PIR:
C:Superfamily: prolactin

Query Match 75.6%; Score 788; DB 2; Length 229;
Best Local Similarity 73.2%; Pred. No. 1,2e-55;
Matches 145; Conservative 23; Mismatches 30; Indels 0; Gaps 0;

Qy 2 PICPGGAARCCVTLRLDFDRAVLSHYIHNLISSEMFSEFDRKRYHNGGFITKAINSCHTS 61
   | : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 32 PVPCEPGNCGVSLRLDFDRAVMSHYIHNLISSEMFNEPKRYAQGKGYITMALNSCHTS 91
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Qy 62 SLAPPEDEKQAOQNMQNDPLSLYSILRSNNPELYHVTVEYRGQGEAPBALSKAVEIEE 121
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 92 SLTPPEDEKQAOQTHHEVLSLIGLRSWNPDLHYLVTEYRGKGVDPDALSPALIEE 151
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Qy 122 QTKRLERMLIYSQVHPETKENIYPVWAGSLPSLQMADEBSKLSAYNLLHCLRRDSK 181
   | : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 152 ENKLLLEGMEIIFQGVIPGAKETEPYVWAGSLPSLQTKDEBARSAFYNNLLHCLRRDSK 211
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Qy 182 IDNYLKILKCRILHNNC 199
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db 212 IDTYLKILKCRILYNNC 229
   | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

RESULT 11
A60620
prolactin - green sea turtle
C:Species: Chelonia mydas (green sea turtle)
C:Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C:Accession: A60620
R:Yasuda, A.; Kawachi, H.; Papkoff, H.
N:Gen. Comp. Endocrinol. 80, 363-371, 1990
A>Title: The complete amino acid sequence of prolactin from the sea turtle (Chelonia mydas)
A:Reference number: A60620; MUID:91146884; PMID:228979
A:Accession: A60620
A:Molecule type: protein
A:Residues: 1-198 <YAS>
A:Cross-references: UNIPROT:P33090; UNIPARC:UPI0000132241
A>Note: 55-Leu, 145-Val, 148-Arg, and 171-Met were also found
C:Superfamily: prolactin
C:Keywords: hormone; pituitary
F:4-11,58-173,190-198/Disulfide bonds: #status experimental

Query Match 75.1%; Score 782.5; DB 1; Length 198;
Best Local Similarity 72.9%; Pred. No. 2.8e-55;
Matches 145; Conservative 26; Mismatches 27; Indels 1; Gaps 1;

```

QY 61 SLSLAPDEDEQAQQQNMNQXDFSLIVSIISSWNEPLVHLVTEVNGMOEAPALISKAVEIE 120
DB 61 SSVLTTPDEDEQAQQQIHHEDDLNLVLGVLRSMNDPLHLVSEVGSIXEAPDTIL-KAVEIE 119
QY 121 EOTKRLLEMEELIVSOVHEETKENEIYPVWSGDPSTLOMADEESRLSAVYNLHLCLRDSDH 180
DB 120 EDDKULLEGMEKIVGVVHGEIENELYSPPSGPLSQQVDEDSRLFAFYNLHLCLRDSDH 179
QY 181 KIDNYIKLIKCRRIHNNNC 199
DB 180 KIDNYIKLIKCRRLIHNDNC 198

RESULT 12
S18882
prolactin - American mink (fragment)
C:Species: Mustela vison (American mink)
C:Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
C:Accession: S18882
R:Bondar, A.A.; Golovin, S.J.; Mertvetsov, N.P.
Submitted to the EMBL Data Library, November 1991
A:Reference number: S18882
A:Accession: S18882
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-175 <BNP>
A:Cross-references: UNIPROT:P29234; UNIPARC:UPI000016C4A1; EMBL:X63235; NID:g1182; PIDN:C:Superfamily: prolactin

Query Match 73.3%; Score 764; DB 2; Length 175;
Best Local Similarity 79.4%; Pred. No. 7, 2e-54;
Matches 139; Conservative 23; Mismatches 13; Indels 0; Gaps 0;

QY 25 LSHYIHNLSSEMESEFDRKYTHGRGFTTKAINSCHTSSLATPEDKEQAQQNMNQKDFSLI 84
DB 1 LSHYIHNLSSEMESEFDRKYTHGRGFTTKAINSCHTSSLATPEDKEQAQQIHHEDDLNL 60
QY 85 VSLIRSMNEPLVHLVTEVNGMOEAPALISKAVEIEGOTRLERMLIYSOVHPETKEN 144
DB 61 LRVLRSMNDPLVHLVSEVRGMOEAPDSILSRALIEIQNRLLGMEKIVGVHPGVREN 120
QY 145 EIVPVWSGDPSTLOMADEESRLSAVYNLHLCLRDSDHKIDNYIKLIKCRRIHNNNC 199
DB 121 EIVPVWSGDPSTLOMADEESRLFAFYNLHLCLRDSDHKIDNYIKLIKCRRIYYDSNC 175

RESULT 13
A60972
prolactin precursor - chicken
C:Species: Gallus gallus (chicken)
C:Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C:Accession: A60972; A32855
R:Hanks, M.C.; Alonzi, J.A.; Sharp, P.J.; Sang, H.M.
J. Mol. Endocrinol. 2, 21-30, 1989
A:Title: Molecular cloning and sequence analysis of putative chicken prolactin cDNA.
A:Reference number: A60972; MUID:89351551; PMID:2765112
A:Accession: A60972
A:Status: not compared with conceptual translation
A:Structure type: mRNA
A:Molecule type: mRNA
A:Residues: 1-229 <HAN>
A:Cross-references: UNIPROT:P14676; UNIPARC:UPI0000132242
R:Wachiki, M.; Tanaka, M.; Masuda, N.; Sugisaki, K.; Yamamoto, M.; Yamakawa, M.; Nagai, J. Biol. Chem. 264, 5535-5539, 1989
A:Title: Primary structure of chicken pituitary prolactin deduced from the cDNA sequence
A:Reference number: A32855; MUID:89174595; PMID:2925618
A:Accession: A32855
A:Molecule type: mRNA
A:Residues: 1-170, 'H', 172-179, 'S', 181-204, 'H', 206-229 <MAT>
A:Cross-references: UNIPARC:UPI000000FC222; GB:J04614; NID:g212612; PIDN:AAA4940_1; PID:C:Comment: The reason for differences between the two records above is unclear. Prolactin
nce from turkey at each position in which the two references above disagree.
C:Superfamily: prolactin

[illegible]

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RESULT 14
A:Accession: A61133
Proactin precursor - turkey
C:Species: Meleagris gallopavo (common turkey)
C:Date: 10-Mar-1994 #sequence revision 07-Apr-1994 #text_change 09-Jul-2004
C:Accession: A61133; S10170; A61528
R:Wong, E.A.; Perrin, N.H.; Silbey, J.L.; El Halawani, M.E.
Gen. Comp. Endocrinol. 83, 18-26, 1991
A>Title: Cloning of a turkey proactin cDNA: expression of proactin mRNA throughout the
A:Reference number: A61133; PMID:91348480; PMID:1879659
A:Accession: A61133
A:Molecule type: mRNA
A:Residues: 1-155, 'R', 157-229 <MO2>
A:Cross-references: UNIPROT:P17572; UNIPARC:UPI00000171406; GB:U05952; NID:g454094; PIDN:
R:Karatzas, C.N.; Zadworny, D.; Kuhnlein, U.
Nucleic Acids Res. 18, 3071, 1990
A>Title: Nucleotide sequence of turkey proactin.
A:Reference number: S10170; PMID:90272435; PMID:2349117
A:Accession: S10170
A:Molecule type: mRNA
A:Residues: 21-229 <KAR>
A:Cross-references: UNIPARC:UPI00000171409; EMBL:X51769; NID:g64095; PIDN:CAA36071.1; PID
R:Corcoran, D.H.; Proudman, J.A.
Comp. Biochem. Physiol. B 99, 569-570, 1991
A>Title: Isoforms of turkey proactin: evidence for differences in glycosylation and in
A:Reference number: A61528; PMID:92119931; PMID:1769204
A:Accession: A61528
A:Molecule type: protein
A:Residues: 31-70 <COR>
A:Cross-references: UNIPARC:UPI000001765CF
C:Superfamily: Proactin
C:Keywords: hormone; pituitary
F:1-10/Domains: signal sequence #status predicted <SIG>
F:31-229/Product: proactin #status predicted <MAT>
F:34-41, 88-204, 221-229/Disulfide bonds: #status predicted

Query Match          71.6%; Score 746; DB 2; Length 229;
Best Local Similarity 68.3%; Pred. No. 2,7e-52;
Matches 136; Conservative 30; Mismatches 33; Indels 0; Gaps 0;

QY      1 LPICGGAACRCOYLTDLPDRANVLSHYINLSSEMSSEPDKRTTHGGFTKAINSCHT 60
        |||||:::||:::||:::||:::||:::||:::||:::||:::||:::||::||
DB      31 LPICGSGVNCVCISGLDFDRAVRLSHYIHLSEINEPFRYAQGFGTTAVNGCHT 90
        |||||:::||:::||:::||:::||:::||:::||:::||:::||:::||::||

QY      61 SLIAPPEDEKQAQQNNQXDFSLIVSILRSWNEPLYHLYTEVRGMQBAPEALISRAVEIE 120
        |||||:::||:::||:::||:::||:::||:::||:::||:::||:::||::||
DB      91 SLLTPPEDKEQTQQIHHEELNLITLGVLRSWNDELIIHLASVQRIRKEAPDTILMKAVEIE 150
        |||||:::||:::||:::||:::||:::||:::||:::||:::||:::||::||

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GenCore version 5.1.6
Copyright (c) 1993 - 2006 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 6, 2006, 14:24:40 ; Search time 46 Seconds
(without alignments)
357.662 Million cell updates/sec

Title: US-09-815-306A-34

Perfect score: 1042
Sequence: 1 LPICPGGAARCVTLRLDFD.....HKIDNYLKIKCRTHNNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
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3: /cgn2_6/prodata/1/1aa/H.COMB.dep:*
4: /cgn2_6/prodata/1/1aa/PC/US.COMB.dep:*
5: /cgn2_6/prodata/1/1aa/RR.COMB.dep:*
6: /cgn2_6/prodata/1/1aa/backfile1.dep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1035	99.3	199	2	US-08-737-248-7
2	1035	99.3	226	2	US-09-949-016-10071
3	1035	99.3	351	1	US-08-196-350-1
4	1031	98.9	228	2	US-09-065-330D-2
5	879	84.4	199	2	US-08-737-248-10
6	869	83.4	199	2	US-08-737-248-12
7	868	83.3	199	2	US-08-737-248-8
8	863	82.8	199	2	US-08-737-248-14
9	863	82.7	199	2	US-08-737-248-13
10	788	75.6	199	2	US-08-737-248-11
11	778.5	74.7	198	2	US-08-737-248-6
12	746	71.6	199	2	US-08-737-248-2
13	746	71.6	426	2	US-08-737-248-4
14	740	71.0	199	2	US-08-737-248-5
15	729	70.0	199	2	US-08-737-248-9
16	659	63.2	197	2	US-08-737-248-15
17	659	63.2	197	2	US-08-737-248-17
18	630	60.5	125	2	US-08-985-526-25
19	630	60.5	253	2	US-08-985-526-27
20	613	58.8	197	2	US-08-737-248-16
21	370	35.5	199	2	US-08-737-248-23
22	272	26.1	187	2	US-08-737-248-18
23	272	26.1	187	2	US-08-737-248-19
24	262	25.1	177	2	US-08-737-248-21
25	262	25.1	236	2	US-09-602-848-2
26	261.5	25.1	188	2	US-08-737-248-20
27	246	23.6	223	2	US-09-602-848-4

28	202.5	19.4	207	1	US-07-656-566-2	Sequence 2, Appl1
29	202.5	19.4	231	1	US-07-656-566-3	Sequence 3, Appl1
30	198	19.0	191	2	US-08-737-248-22	Sequence 22, Appl1
31	198	19.0	217	2	US-08-589-028-10	Sequence 10, Appl1
32	198	19.0	217	2	US-08-784-582-10	Sequence 10, Appl1
33	198	19.0	217	2	US-08-785-271-10	Sequence 10, Appl1
34	198	19.0	217	2	US-08-759-628-11	Sequence 11, Appl1
35	198	19.0	217	2	US-09-284-878-1	Sequence 1, Appl1
36	198	19.0	217	2	US-09-929-918-9	Sequence 9, Appl1
37	198	19.0	217	2	US-09-571-024B-1	Sequence 1, Appl1
38	196	18.8	191	2	US-09-571-024B-9	Sequence 9, Appl1
39	195	18.7	217	1	US-08-469-486-51	Sequence 51, Appl1
40	195	18.7	217	1	US-08-469-658-51	Sequence 51, Appl1
41	192	18.4	191	2	US-08-093-383-3	Sequence 3, Appl1
42	192	18.4	191	2	US-09-571-024B-3	Sequence 3, Appl1
43	191	18.3	191	2	US-09-571-024B-6	Sequence 6, Appl1
44	191	18.3	217	1	US-08-187-756C-4	Sequence 4, Appl1
45	191	18.3	217	1	US-08-710-324A-4	Sequence 4, Appl1

ALIGNMENTS

RESULT 1
US-08-737-248-7
Sequence 7, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadworny, David
APPLICANT: Karatzas, Coctas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESSES:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-Apr-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989,6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-7
Query Match 99.3%; Score 1035; DB 2; Length 199;

Best Local Similarity 99.5%; Pred. No. 1.7e-99;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Db 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60

Qy 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGQOEAPEAILSKAVEIE 120
Db 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGQOEAPEAILSKAVEIE 120

Qy 121 EOTKRLERMELIVSQVHPETKENIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Db 121 EOTKRLERMELIVSQVHPETKENIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180

Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 181 KIDNYLKLKCRITIHNNNC 199

RESULT 2
US-09-949-016-10071
; Sequence 10071, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; FILE REFERENCE: CLO01307
; CURRENT APPLICATION NUMBER: US/09/949,016
; PRIOR FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10071
; LENGTH: 236
; TYPE: PRT
; ORGANISM: Human
US-09-949-016-10071

Query Match 99.3%; Score 1035; DB 2; Length 236;
Best Local Similarity 99.5%; Pred. No. 2.1e-99;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Db 38 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 97

Qy 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGQOEAPEAILSKAVEIE 120
Db 98 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGQOEAPEAILSKAVEIE 157

Qy 121 EOTKRLERMELIVSQVHPETKENIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Db 158 EOTKRLERMELIVSQVHPETKENIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 217

Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 218 KIDNYLKLKCRITIHNNNC 236

RESULT 3
US-08-196-350-1
; Sequence 1, Application US/08196350
; Patent No. 5585099
; GENERAL INFORMATION:
; APPLICANT: Richards, Sue
; APPLICANT: Kaplan, Joanne

APPLICANT: Mosciicki, Richard
TITLE OF INVENTION: PROLACTIN AS ADJUVANT
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Brad Salcedo
STREET: One Kendall Square
CITY: Cambridge
STATE: MA
COUNTRY: U.S.A.
ZIP: 02139
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/196,350
FILING DATE:
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Goetz, William G
REGISTRATION NUMBER: 27,787
REFERENCE/DOCKET NUMBER: GEN 4-1.0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 6172527868
TELEFAX: 6173747225
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 351 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
ORGANISM: human prolactin
US-08-196-350-1

Query Match 99.3%; Score 1035; DB 1; Length 351;
Best Local Similarity 99.5%; Pred. No. 3.7e-99;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 60
Db 153 LPICGGAARCOVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRYTHGGRFTTKAINSCHT 212

Qy 61 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGQOEAPEAILSKAVEIE 120
Db 213 SSLATPEDKEQAQOMNQDPLSLIVSILRSWNEPLVHLVTEVRGQOEAPEAILSKAVEIE 272

Qy 121 EOTKRLERMELIVSQVHPETKENIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 180
Db 273 EOTKRLERMELIVSQVHPETKENIYPVWSGLPSLQMADEESRLSAYNNLLHCLRDSDH 332

Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 333 KIDNYLKLKCRITIHNNNC 351

RESULT 4
US-09-065-330D-2
; Sequence 2, Application US/09065330D
; Patent No. 6890738
; GENERAL INFORMATION:
; APPLICANT: WALKER, Ameae M.
; TITLE OF INVENTION: PROLACTIN ANTAGONISTS AND USES THEREOF
; FILE REFERENCE: 39754-0611-1CPICP
; CURRENT APPLICATION NUMBER: US/09/065,330D
; PRIOR FILING DATE: 1998-04-23
; CURRENT APPLICATION NUMBER: PCT/US97/01435
; PRIOR FILING DATE: 1997-01-30
; PRIOR APPLICATION NUMBER: US 08/594,809

PRIOR FILING DATE: 1996-01-31
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 228
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: VARIANT
LOCATION: 208
OTHER INFORMATION: Site mutated amino acid residue where the normal
OTHER INFORMATION: codon coding for serine is modified preferably to encode
OTHER INFORMATION: for aspartate or glutamate, most preferably
OTHER INFORMATION: aspartate.
US-09-065-330D-2

Query Match 98.9%; Score 1031; DB 2; Length 228;
Best Local Similarity 99.0%; Pred. No. 5,2e-99;
Matches 197; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 LPICGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 30 LPICGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 89
QY 61 SSLATPEDKEQAQOQNMQDFLSIVLSRWNPELYHLYTEVRGMQEAPEALISKAVERE 120
DB 90 SSLATPEDKEQAQOQNMQDFLSIVLSRWNPELYHLYTEVRGMQEAPEALISKAVERE 149
QY 121 EOTKRLBEMELIVQVHPETKENEIYPWVSGLPQLQMADESRLSAYYNLHCLRRDSH 180
DB 150 EOTKRLBEMELIVQVHPETKENEIYPWVSGLPQLQMADESRLSAYYNLHCLRRDSH 209
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 210 KIDNYLKLKCRITIHNNNC 228

RESULT 5

US-08-737-248-10
Sequence 10, Application US/08737248
Patent No. 6114305

GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Coetas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-Apr-1997
CLASSIFICATION: 424

PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA: FR 94/05550
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763

REFERENCE/DOCKET NUMBER: 989.6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-10

Query Match 84.4%; Score 879; DB 2; Length 199;
Best Local Similarity 80.9%; Pred. No. 2,7e-83;
Matches 161; Conservative 22; Mismatches 16; Indels 0; Gaps 0;

QY 1 LPICGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 1 LPICGAARCOVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
QY 61 SSLATPEDKEQAQOQNMQDFLSIVLSRWNPELYHLYTEVRGMQEAPEALISKAVERE 120
DB 61 SSLATPEDKEQAQOQNMQDFLSIVLSRWNPELYHLYTEVRGMQEAPEALISKAVERE 120
QY 121 EOTKRLBEMELIVQVHPETKENEIYPWVSGLPQLQMADESRLSAYYNLHCLRRDSH 180
DB 121 EOTKRLBEMELIVQVHPETKENEIYPWVSGLPQLQMADESRLSAYYNLHCLRRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIHNNNC 199

RESULT 6

US-08-737-248-12
Sequence 12, Application US/08737248
Patent No. 6114305

GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Coetas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-Apr-1997
CLASSIFICATION: 424

PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA: FR 94/05550
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989.6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383

TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-737-248-12

Query Match 83.4%; Score 869; DB 2; Length 199;
Best Local Similarity 80.4%; Pred. No. 3e-82;
Matches 160; Conservative 22; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGAAACQVTLRDLFDRAVLSHYINLSSEMFSEPDKRYTHRGFTTKAINCHT 60
DB 1 LPICPGAVNCQVSLRDLFDRAVLSHYINLSSEMFSEPDKRYAOGRGFTTKAINCHT 60

QY 61 SSLATPEDKQAQOQIHHEVLLNLIRVLSWMDPLVHVEVGMQAPALISKAVEIE 120
DB 61 SSLATPEDKQAQOQIHHEVLLNLIRVLSWMDPLVHVEVGMQAPALISKAVEIE 120

QY 121 EQRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180
DB 121 EQRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180

QY 121 EQNRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180
DB 121 EQNRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180

QY 181 KIDNYLKLKCRITIHNNC 199
DB 181 KIDNYLKLKCRITIHNNC 199

RESULT 7
US-08-737-248-8
; Sequence 8, Application US/08737248
; Patent No. 6114305
; GENERAL INFORMATION:
; APPLICANT: Guemene, Daniel
; APPLICANT: Zadowny, David
; APPLICANT: Karatzas, Costas
; TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WEISER & ASSOCIATES
; STREET: 230 South Fifteenth Street, Suite 500
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/737,248
; FILING DATE: 28-APR-1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FR95/00576
; FILING DATE: 03-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 94/05550
; FILING DATE: 05-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weiser, Gerard J.
; REGISTRATION NUMBER: 19,763
; REFERENCE/DOCKET NUMBER: 989,6411P
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 215-875-8394
; TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:

LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-737-248-8

Query Match 83.3%; Score 868; DB 2; Length 199;
Best Local Similarity 79.4%; Pred. No. 3.8e-82;
Matches 158; Conservative 24; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGAAACQVTLRDLFDRAVLSHYINLSSEMFSEPDKRYTHRGFTTKAINCHT 60
DB 1 LPICPGAVNCQVSLRDLFDRAVLSHYINLSSEMFSEPDKRYAOGRGFTTKAINCHT 60

QY 61 SSLATPEDKQAQOQIHHEVLLNLIRVLSWMDPLVHVEVGMQAPALISKAVEIE 120
DB 61 SSLATPEDKQAQOQIHHEVLLNLIRVLSWMDPLVHVEVGMQAPALISKAVEIE 120

QY 121 EQRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180
DB 121 EQRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180

QY 121 EQNRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180
DB 121 EQNRRLLEGMELIYQVHPETKENEIYPVWSGLPSLQMADESRLSAYYNLLHCLRRDSH 180

QY 181 KIDNYLKLKCRITIHNNC 199
DB 181 KIDNYLKLKCRITIHNNC 199

RESULT 8
US-08-737-248-14
; Sequence 14, Application US/08737248
; Patent No. 6114305
; GENERAL INFORMATION:
; APPLICANT: Guemene, Daniel
; APPLICANT: Zadowny, David
; APPLICANT: Karatzas, Costas
; TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WEISER & ASSOCIATES
; STREET: 230 South Fifteenth Street, Suite 500
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/737,248
; FILING DATE: 28-APR-1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FR95/00576
; FILING DATE: 03-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 94/05550
; FILING DATE: 05-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weiser, Gerard J.
; REGISTRATION NUMBER: 19,763
; REFERENCE/DOCKET NUMBER: 989,6411P
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 215-875-8394
; TELEFAX: 215-875-8394
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 199 amino acids
; TYPE: amino acid
; STRANDEDNESS:

TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-14

Query Match 82.8%; Score 863; DB 2; Length 199;
Best Local Similarity 80.4%; Pred. No. 1,2e-81;
Matches 160; Conservative 20; Mismatches 19; Indels 0; Gaps 0;

QY 1 LPICGGAARCOVTLTDLFDRAVAVLSHYIHNSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 1 LPICSGAVNCCVSLDLFDRAVAVLSHYIHNSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SLATPEDEKQAOQTHHEVLMSLIGLRSWMDPLVHLYEVGMOEAPALISKAVERE 120
DB 61 SLATPEDEKQAOQTHHEVLMSLIGLRSWMDPLVHLYEVGMOEAPALISKAVERE 120
QY 121 EOTKRLLEMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYVNLHCLRDSH 180
DB 121 EONKRLLEMEILVGOVHPETKENEIYPWVSGLPISQMADEESRLSAYVNLHCLRDSH 180
QY 181 KIDNYLKLKCRITNNNC 199
DB 181 KIDNYLKLKCRITNNNC 199

RESULT 9
US-08-737-248-13

Sequence 13, Application US/08737248
Patent No. 6114305

GENERAL INFORMATION:

APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Releasee #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989,6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394

INFORMATION FOR SEQ ID NO: 13:

SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein
US-08-737-248-13

Query Match 75.7%; Score 789; DB 2; Length 199;
Best Local Similarity 73.2%; Pred. No. 6.1e-74;
Matches 145; Conservative 24; Mismatches 29; Indels 0; Gaps 0;

QY 2 PICPGGAARCOVTLTDLFDRAVAVLSHYIHNSSEMFSEFDKRYTHGRGFTITKAINSCHT 61
DB 2 PFCFPGNCGVSLDLFDRAVAVLSHYIHNSSEMFSEFDKRYTHGRGFTITKAINSCHT 61
QY 62 SLATPEDEKQAOQTHHEVLMSLIGLRSWMDPLVHLYEVGMOEAPALISKAVERE 121
DB 62 SLATPEDEKQAOQTHHEVLMSLIGLRSWMDPLVHLYEVGMOEAPALISKAVERE 121
QY 122 EOTKRLLEMEILVSOVHPETKENEIYPWVSGLPISQMADEESRLSAYVNLHCLRDSH 181
DB 122 EONKRLLEMEILVGOVHPETKENEIYPWVSGLPISQMADEESRLSAYVNLHCLRDSH 181
QY 182 KIDNYLKLKCRITNNNC 199
DB 182 KIDNYLKLKCRITNNNC 199

RESULT 10
US-08-737-248-11

Sequence 11, Application US/08737248
Patent No. 6114305

GENERAL INFORMATION:

APPLICANT: Guemene, Daniel
APPLICANT: Zadorny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSER: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Releasee #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989,6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394

INFORMATION FOR SEQ ID NO: 11:

SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein
US-08-737-248-11

Query Match 75.6%; Score 788; DB 2; Length 199;
Best Local Similarity 73.2%; Pred. No. 7.8e-74;

	Matches	145;	Conservative	23;	Mismatches	30;	Indels	0;	Gaps	0;
QY	2	PICPGGAA	CCVTLTDL	FDRAVVL	SHYIHN	SSSEMF	SEFDKRY	THRGRT	YAIN	SCHTS 61
Db	2	PVCPRGPG	PCGCVS	LTDLDF	DRAMV	SHYIHN	LSSEMF	NFEFDK	RYAOG	KGITWALNSCHTS 61
QY	62	SLATPEDE	KEQAQQ	QQNQKDF	LSLIV	LSIKSWNE	PLHVL	TVENG	MGCEA	EPALISKAVEIEE 121
Db	62	SLPTPEDE	KEQAQQ	THHEVMS	LITGL	LSKSWND	PLHVL	TVENG	MGCGV	PDALISRAIEIEE 121
QY	122	QTKRLLE	RMELIV	ESV	HPETK	ENENI	YPVWS	GPLSQM	ADEBS	RLSAYNNLHCLTRDSHK 181
Db	122	ENKRLLE	GEMENI	FGVIV	PKAKETE	PYPVWS	GPLSQ	TQXED	EDARH	SAFNNLHCLTRDSSK 181
QY	182	IDNTYK	LKLCRI	IIHN	NNC	199				
Db	182	IDTYK	LKLCRI	IIYNN	C	199				

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US-08-737-248-6
; Sequence 6, Application US/08737248
; Patent No. 6114305
; GENERAL INFORMATION:
; APPLICANT: Guemene, Daniel
; APPLICANT: Zadworny, David
; APPLICANT: Karatzas, Costas
; TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
; TITILE OF INVENTION: TREATING BIRD BROODINESS
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: WEISER & ASSOCIATES
; STREET: 230 South Fifteenth Street, Suite 500
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/737,248
; FILING DATE: 28-APR-1997
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/FR95/00576
; FILING DATE: 03-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR 94/05550
; FILING DATE: 05-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Weiser, Gerard J.
; REGISTRATION NUMBER: 19,763
; REFERENCE/DOCKET NUMBER: 989.6411P
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 215-875-8383
; TELEFAX: 215-875-8394
; INFORMATION FOR SEQ. ID NO.: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 198 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-737-248-6

Query Match      74.7%; Score 778.5; DB 2; Length 198;
Best Local Similarity 72.4%; Pred. No. 7,5e-73;
Matches 144; Conservative 26; Mismatches 28; Indels 1; Gaps 1

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Db      1 LPVCSGSGVGCQVSLLENLFDPAVKLSLTHIHLSSEMFNFDRIYAQGRGFLTAINGCHT 60
Qy      61 SSLATPEDKEAOQONCKDPLSLIYSILRSWNEPLVHLYTEVRGQOAEPAILSKAVEIE 120
Db      61 SLLTPEDKEQAOQIHEDDLNLVYGVIRSNWDPLHLVSEVQSIKEADPTIL-KAVEIE 119
Qy      121 EOTKRILERMELIYSQVHPETKENIYPPVSGSLPSLQMADEESRLSAYNYNLHLCRRDSH 180
Db      120 EODKRILGEMEKIYQVHPGETENELIYSPWGSLSLQOVDEDSRLPAPYNLHLHCLRRDSH 179
Qy      181 KIDNYLKLKLCRIIHNNNC 199
Db      180 KIDNYLKLKLCRIIHNNC 198

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QY 181 KIDNYLKLKCRRIHNNC 199
DB 181 KIDNYLKLKCRRIHDSNC 199

Search completed: January 6, 2006, 14:33:55
Job time : 52 secs

RESULT 15

US-08-737-248-9
Sequence 9, Application US/08737248
Patent No. 6114305
GENERAL INFORMATION:
APPLICANT: Guemene, Daniel
APPLICANT: Zadworny, David
APPLICANT: Karatzas, Costas
TITLE OF INVENTION: USE OF PROLACTIN FOR PREVENTING AND/OR
TREATING BIRD BROODINESS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: WEISER & ASSOCIATES
STREET: 230 South Fifteenth Street, Suite 500
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/737,248
FILING DATE: 28-APR-1997
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR95/00576
FILING DATE: 03-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 94/05550
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 989.6411P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 199 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-737-248-9

Query Match 70.0%; Score 729; DB 2; Length 199;

Best Local Similarity 65.3%; Pred. No. 1.1e-67; Mismatches 33; Indels 0; Gaps 0;
Matches 130; Conservative 36;

QY 1 LPICPGGARCCQVTLRDLFDRAVVLISHYIHNLSSEMFSEFDRKYTHGRGFTTKAINSCHT 60
DB 1 IPVCRGSRVRCQVSLPDLFDRAVVLISHYIHNLSSEMFSEFDRKYTHGRGFTTKAINSCHT 60
QY 61 SSLATPEDEKQAQONQKDFLSLIVISILRSWNEPIYHLYTEVRGQDEAPALSKAVEIE 120
DB 61 SSISTPEDEKQAQOQTHHEVLMIDLILGLRSWNPDLHLASEVHSLPKAPSAITKATEVK 120
QY 121 EOTKRLRLRMELIVSQVHPETKENEIYPVWSGLPSIQMADESRSL SAYYNLHCLRRDSH 180
DB 121 BENQRLRLBIEIKIVDQVHGAKENKAYISWSGLPSIQTTDEPARLFAFYNLFRCLRRDSH 180
QY 181 KIDNYLKLKCRRIHNNC 199
DB 181 KIDNYLKLKCRRIHNNC 199

Protein Sequence Searches - February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.
- If you encounter an accession number from an older search run against UniProt (results file extension **.rup**) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (UniPARC) at:

<http://www.pir.uniprot.org/database/archive.shtml>

If you have any questions regarding this information or your results, please contact any STIC searcher.

When submitting sequence search results for scanning into IFW, please include a copy of this attachment to assist any future Examiners or members of the public who may encounter UniProt temporary accession numbers.

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:21:44 ; Search time 230 Seconds

(without alignments)
610.435 Million cell updates/sec

Title: US-09-815-306a-34

Perfect score: 1042
Sequence: 1 LPICPGAGARCVTLRLD.....HKIDNYLKLKCRITHHNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database : UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1035	99.3	227	1 PRL_HUMAN	P01236 homo sapien
2	1035	99.3	227	2 Q5THQ0_HUMAN	Q5THQ0 homo sapien
3	1035	99.3	228	2 Q510G2_HUMAN	Q510G2 homo sapien
4	1021	98.0	217	2 Q52Z59_MACMU	Q52Z59 macaca mula
5	1021	98.0	227	1 PRL_MACMU	P55151 macaca mula
6	1018	97.7	217	2 Q52Z60_9PRIM	Q52Z60 treachyithe
7	1006	96.5	199	2 Q9TS41_9PRIM	Q9TS41 papio (dabo
8	994	95.4	217	2 Q52Z58_PITPI	Q52Z58 pithecia pi
9	969	93.0	217	2 Q6A190_CALJA	Q6A190 callithrix
10	889	85.3	230	2 Q6A1B8_NICPY	Q6A1B8 nycticebus
11	879	84.4	199	1 PRL_CAMR	P22393 camelus dro
12	872	83.7	229	1 PRL_PIG	P01238 sus scrofa
13	871	83.6	229	1 PRL_HORSE	P12420 equus caball
14	870	83.5	229	1 PRL_AILME	Q8HXS1 alluopoda
15	869	83.4	229	1 PRL_MUSVI	P29234 musstela vis
16	866	83.1	227	1 PRL_RABIT	Q28632 oryctolagus
17	859	82.4	229	1 PRL_PELCA	P46403 felis silve
18	856	82.1	199	1 PRL_BALEO	P33089 balenopter
19	849	81.5	228	1 PRL_TRIUV	Q62781 trichosurus
20	839	80.5	228	1 PRL_MONDO	Q62819 monodelphis
21	830	79.7	222	2 Q8T110_9CEST	Q8T110 taenia hyda
22	822	78.9	215	2 Q66LM9_TRIUV	Q66LM9 trichosurus
23	795	76.3	228	1 PRL_CERGL	Q6UC74 cervus elap
24	790	75.8	229	1 PRL_CAPRI	Q28318 capra hircu
25	789	75.7	229	1 PRL_BOVIN	P01239 bos taurus
26	788	75.6	229	1 PRL_SHEEP	P01230 ovie aries
27	782.5	75.1	198	1 PRL_CHEMY	P33090 cheilonia my
28	775	74.4	229	2 Q616F6_EUBMA	Q616F6 eublepharis
29	773	74.2	229	2 Q6FHO2_GAVES	Q6FHO2 anser anser
30	773	74.2	229	2 Q6PLT3_GAVES	Q6PLT3 anser anser
31	769	73.8	199	1 PRL2_ALIMI	P55752 alligator m

32	769	73.8	229	2 Q7SRW5_ANAPL	Q7SRW5 anas platyr
33	768	73.7	199	1 PRL2_CRONO	P55754 crocodylus
34	765	73.4	229	2 Q6PLT4_GAVES	Q6PLT4 anser anser
35	764	73.3	199	1 PRL2_ALIMI	P55751 alligator m
36	763	73.2	199	1 PRL1_CRONO	P55753 crocodylus
37	763	73.2	229	2 Q52PE0_GAVES	Q52PE0 anser anser
38	762	73.1	229	1 PRL_CHICK	P14676 gallus gall
39	757	72.6	229	2 Q75QK4_COTCO	Q75QK4 coturnix co
40	746	71.6	229	1 PRL_MELGA	P17572 meleagris g
41	744	71.4	233	2 Q7T1A5_9SALA	Q7T1A5 ambystoma b
42	729	70.0	199	1 PRL_TOXAF	P10765 toxodonta a
43	710	68.1	230	2 Q6DJG3_XENLA	Q6DJG3 xenopus lae
44	686	65.8	230	2 Q56A64_XENLA	Q56A64 xenopus lae
45	682.5	65.5	214	2 Q8JFX6_PANCA	Q8JFX6 rana catesb

ALIGNMENTS

RESULT 1
PRL_HUMAN STANDARD; PRT; 227 AA.
AC P01236; Q15199; Q92996;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Proactin precursor (PRL).
GN Name=PRL;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX MEDLINE=81168179; PubMed=6260780;
RA Cooke N.E., Colt D., Shine J., Baxter J.D., Martial J.A.;
RT "Human proactin. cDNA structural analysis and evolutionary
comparisons.";
RT J. Biol. Chem. 256:4007-4016(1981).
RN [2]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=84182507; PubMed=6325171;
RA Ttuong A.T., Duez C., Belayew A., Renard A., Pictet R.L., Bell G.I.,
Martial J.A.;
RT "Isolation and characterization of the human proactin gene.";
RN EMBL J. 3:429-437(1984).
RN [3]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=91267286; PubMed=2050267; DOI=10.1016/0303-7207(91)90247-P;
RA Hirata Y., Tatem K., Shiozawa M., Aiso S., Fukasawa T., Yasuda K.,
Miyai K.;
RT "A placenta-specific 5'non-coding exon of human proactin.";
RN Mol. Cell. Endocrinol. 75:71-80(1990).
RN [4]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Testis;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klapper S.F., Zeeberg B., Bueltow K.H., Schaefer C.F., Hsieh F.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Haileh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Cassavani T.L., Scheetz T.E.,
Brownstein M.J., Ueidi T.B., Toshitsuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
Bosak S.A., McKean P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,
Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Fahy J., Hulton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

RA Butterfield V.S.N., Krzywinski M.I., Skalska U., Smallie D.E.,
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences."
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 [5]
 RP NUCLEOTIDE SEQUENCE OF 11-227.
 RX MEDLINE=84264464; PubMed=6146607;
 RA Takahashi H., Nabeshima Y., Nabeshima Y., Ogata K., Takeuchi S.,
 RT "Molecular cloning and nucleotide sequence of DNA complementary to
 RT human decidual prolactin mRNA."
 RL J. Biochem. 95:1491-1499(1984).
 [6]
 RP NUCLEOTIDE SEQUENCE OF 11-201.
 RC TISSUE=Mammary gland;
 RX MEDLINE=97411082; PubMed=9266104; DOI=10.1023/A:1005879103367;
 RA Shaw-Bruba C.M., Pirrucciello S.J., Shull J.D.,
 RT "Expression of the prolactin gene in normal and neoplastic human
 RT breast tissues and human mammary cell lines: promoter usage and
 RT alternative mRNA splicing."
 RL Breast Cancer Res. Treat. 44:243-253(1997).
 [7]
 RP PROTEIN SEQUENCE OF 29-227.
 RX MEDLINE=78046207; PubMed=925136;
 RA Shome B., Parlow A.F.,
 RT "Human pituitary prolactin (hPRL): the entire linear amino acid
 RT sequence."
 RL J. Clin. Endocrinol. Metab. 45:1112-1115(1977).
 [8]
 RP PROTEIN SEQUENCE OF 29-53.
 RX MEDLINE=75151509; PubMed=1126929;
 RA Jacobs J.W., Niall H.D.,
 RT "High sensitivity automated sequence determination of polypeptides."
 RL J. Biol. Chem. 250:3629-3636(1975).
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by
 CC promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC -1- CAUTION: Ref.3 sequence differs from that shown due to a
 CC frameshift in position 8.
 CC -----
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 DR EMBL, V00566; CAA23829.1; -; mRNA.
 DR EMBL, X00540; CAA25214.1; -; Genomic_DNA.
 DR EMBL, X00541; CAA25214.1; JOINED; Genomic_DNA.
 DR EMBL, X00543; CAA25214.1; JOINED; Genomic_DNA.
 DR EMBL, X00544; CAA25214.1; JOINED; Genomic_DNA.
 DR EMBL, X54393; CAA38263.1; ALT_FRAME; mRNA.
 DR EMBL, X54393; CAA38264.1; ALT_FRAME; mRNA.
 DR EMBL, BC015850; AAH15850.1; -; mRNA.
 DR EMBL, M29386; AAA60173.1; -; mRNA.
 DR EMBL, D00411; BAA00312.1; -; mRNA.
 DR EMBL, U75583; AAB70858.1; -; mRNA.
 DR PIR, A90998; LCHU.
 DR PDB, 1N9D; NMR; A=29-227.
 DR PDB, 1RW5; NMR; A=29-227.
 DR Ensembl, ENSG00000172179; Homo sapiens.
 DR HGNC, HGNC:9445; PRL.
 DR H-InvDB, HIX0005617; -.
 DR MIM, 176760; -.
 DR GO, GO:0005146; P:prolactin receptor binding; TAS.
 DR GO, GO:0008283; P:cell proliferation; TAS.
 DR GO, GO:0007166; P:cell surface receptor linked signal transdu. .; TAS.
 DR GO, GO:0007516; P:hormone development; TAS.
 DR GO, GO:0007565; P:pregnancy; NAS.
 DR InterPro, IPR012351; Cytokine 4 hlx.
 DR InterPro, IPR01400; Somatotropin.
 DR PANTHER, PTHR11417; Somatotropin; 1.

DR Pfam; PF0103; Hormone_1; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW 3D-structure; Direct protein sequencing; Glycoprotein; Hormone;
 KW Lactation; Pituitary; Signal.
 FT SIGNAL 1
 FT CHAIN 29
 FT CARBOHYD 59
 FT DISULFID 32
 FT DISULFID 36
 FT DISULFID 219
 FT CONFLICT 42
 FT CONFLICT 110
 FT CONFLICT 113
 FT CONFLICT 118
 FT CONFLICT 148
 FT CONFLICT 172
 FT CONFLICT 190
 FT CONFLICT 206
 SQ SEQUENCE 227 AA; 25876 MW; 952BBA1B6A55527 CRC64;
 Query Match 99.3%; Score 1035; DB 1; Length 227;
 Best Local Similarity 99.5%; Pred. No. 4.9e-73;
 Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 LPICGGANACQVTLRLPFRAYVLSHYINLSSEMFSEDPKRTYHGRFTTKAINSCHT 60
 DB 29 LPICGGANACQVTLRLPFRAYVLSHYINLSSEMFSEDPKRTYHGRFTTKAINSCHT 88
 QY 61 SSLATPDKQAOQOMOKDFSLIVSLIRSMNEPLVLYLTVESVQGEAPALISKAVEIE 120
 DB 89 SSLATPDKQAOQOMOKDFSLIVSLIRSMNEPLVLYLTVESVQGEAPALISKAVEIE 148
 QY 121 EOTRRLERMEIYVQVHPETKENEIYPVWSGLPSLQMADEESRLAYNLLHCLRDSH 180
 DB 149 EOTRRLERMEIYVQVHPETKENEIYPVWSGLPSLQMADEESRLAYNLLHCLRDSH 208
 QY 181 KIDNYLKLKCRITHHNNC 199
 DB 209 KIDNYLKLKCRITHHNNC 227
 RESULT 2
 OTH00 HUMAN
 ID Q5TH00 HUMAN PRELIMINARY; PRT; 227 AA.
 AC Q5TH00;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Prolactin.
 GN Name=PRL; ORFNames=RP3-404K8.1-001;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
 OC Homo.
 OC NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Nickerson T.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
 DR EMBL; AL023883; CAI20469.1; -; Genomic_DNA.
 DR Ensembl; ENSG00000172179; Homo sapiens.
 DR GO; GO:0005176; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR012351; Cytokine 4 hlx.
 DR InterPro; IPR01400; Somatotropin.
 DR Pfam; PF0103; Hormone_1; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW Hormone.

SO SEQUENCE 227 AA; 25876 MW; 952BBAB6A955527 CRC64;
Query Match 99.3%; Score 1035; DB 2; Length 227;
Best Local Similarity 99.5%; Pred. No. 4,9e-73;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICPGGAACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 29 LPICPGGAACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 88
QY 61 SSLATPDEKQAQOQNMNQKDFLSLIVSLIRSNMPEPLVHLVTEVRGMQEAPEALISKAVEIE 120
DB 89 SSLATPDEKQAQOQNMNQKDFLSLIVSLIRSNMPEPLVHLVTEVRGMQEAPEALISKAVEIE 148
QY 121 EOTKRLERMEILVSGVHPETKENETIYPWMSGLPISLQMADESRSLSAVYNLHLCURDSH 180
DB 149 EOTKRLERMEILVSGVHPETKENETIYPWMSGLPISLQMADESRSLSAVYNLHLCURDSH 208
QY 181 KIDNYLKILKCRRIHNNNC 199
DB 209 KIDNYLKILKCRRIHNNNC 227
RESULT 3
OS10G2 HUMAN PRELIMINARY; PRT; 228 AA.
ID OS10G2
AC OS10G2
DT 10-MAY-2005 (TEMBLrel. 30, Created)
DT 10-MAY-2005 (TEMBLrel. 30, Last sequence update)
DT 10-MAY-2005 (TEMBLrel. 30, Last annotation update)
DE Proactin.
GN Name=PR;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homiidae;
OC Homo.
OX NCBI_TaxID=9606;
OX (1)
RN NUCLEOTIDE SEQUENCE.
RC TISSUE=Pituitary;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Schuler G.D.,
RA Klausner R.D., Collins L., Wagner F.S., Shenmen C.M., Bhat N.K.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Heide F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heide F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Udell T.B., Toshyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mulhally S.J.,
RA Bosak S.A., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richard S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny K.C., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywnicki M.I., Skalka U., Smallue D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences."
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Pituitary;
RA Director MGC Project;
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
DR EMBL: BC088370; AAH88370.1; -; mRNA.
DR GO: 0005576; C:extracellular region; IEA.
DR GO: 0005179; F:hormone activity; IEA.
DR InterPro: IPR012351; Cytokine_4_hlx.
DR InterPro: IPR001400; Somatotropin.

DR PANTHER: PTHR11417; Somatotropin; 1.
DR Pfam: PF00103; Hormone_1; 1.
DR PRINTS: PR00836; SOMATOTROPIN.
DR PROSITE: PS00266; SOMATOTROPIN_1; 1.
DR PROSITE: PS00338; SOMATOTROPIN_2; 1.
DR Hormone.
SO SEQUENCE 228 AA; 25947 MW; C592E517CB186E42 CRC64;
Query Match 99.3%; Score 1035; DB 2; Length 228;
Best Local Similarity 99.5%; Pred. No. 4,9e-73;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 LPICPGGAACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 30 LPICPGGAACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 89
QY 61 SSLATPDEKQAQOQNMNQKDFLSLIVSLIRSNMPEPLVHLVTEVRGMQEAPEALISKAVEIE 120
DB 90 SSLATPDEKQAQOQNMNQKDFLSLIVSLIRSNMPEPLVHLVTEVRGMQEAPEALISKAVEIE 149
QY 121 EOTKRLERMEILVSGVHPETKENETIYPWMSGLPISLQMADESRSLSAVYNLHLCURDSH 180
DB 150 EOTKRLERMEILVSGVHPETKENETIYPWMSGLPISLQMADESRSLSAVYNLHLCURDSH 209
QY 181 KIDNYLKILKCRRIHNNNC 199
DB 210 KIDNYLKILKCRRIHNNNC 228
RESULT 4
OS52259 MACMU PRELIMINARY; PRT; 217 AA.
ID OS52259
AC OS52259
DT 13-SEP-2005 (TEMBLrel. 31, Created)
DT 13-SEP-2005 (TEMBLrel. 31, Last sequence update)
DT 13-SEP-2005 (TEMBLrel. 31, Last annotation update)
DE Proactin (Fragment).
GN Name=PR;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopitheinae; Macaca.
OX NCBI_TaxID=9544;
OX (1)
RN NUCLEOTIDE SEQUENCE.
RA Li Y., Zhang Y.P.;
RT "Molecular evolution of prolactin gene in higher primate."
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL: AY851384; AAX99164.1; -; Genomic_DNA.
DR EMBL: AY851381; AAX99164.1; JOINED; Genomic_DNA.
DR EMBL: AY851382; AAX99164.1; JOINED; Genomic_DNA.
DR EMBL: AY851383; AAX99164.1; JOINED; Genomic_DNA.
DR GO: 0005576; C:extracellular region; IEA.
DR GO: 0005179; F:hormone activity; IEA.
DR InterPro: IPR012351; Cytokine_4_hlx.
DR InterPro: IPR001400; Somatotropin.
DR Pfam: PF00103; Hormone_1; 1.
DR PRINTS: PR00836; SOMATOTROPIN.
DR PROSITE: PS00266; SOMATOTROPIN_1; 1.
DR PROSITE: PS00338; SOMATOTROPIN_2; 1.
DR Hormone.
FT NON TER
KW K
SO SEQUENCE 217 AA; 24873 MW; C45352CF5CAFC891 CRC64;
Query Match 98.0%; Score 1021; DB 2; Length 217;
Best Local Similarity 97.5%; Pred. No. 5,8e-72;
Matches 194; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 LPICPGGAACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 60
DB 19 LPICPGGAACQVTLRLDFDRAVVLISHYIHNLSSEMFSEFDKRYTHGRGFTTKAINSCHT 78
QY 61 SSLATPDEKQAQOQNMNQKDFLSLIVSLIRSNMPEPLVHLVTEVRGMQEAPEALISKAVEIE 120

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Db 79 SSLPTPEKQAOQNMOKDFSLIVSLIRSWNEPLVHLVTEVRGMEAPALISKAIVE 138
Qy 121 EOTRLLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEBSRLSAYYNLLHCLRDSH 180
Db 139 EOTRLLERMEILVSOVHPETKENEIYPVWTGTPSLQMADEBSRLSAYYNLLHCLRDSH 198
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 199 KIDNYLKLKCRITIHNNNC 217

RESULT 5
PRL_MACMU STANDARD; PRT; 227 AA.
ID_PRL_MACMU
AC PS151;
DT 01-OCT-1996 (Rel. 34, Created)
DT 01-OCT-1996 (Rel. 34, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Prolactin precursor (PRL).
GN Name=PRL;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RC TISSUE=Decidua;
RX MEDLINE=94220570; PubMed=8167226;
RA Brown N.A., Bethea C.L.;
RT "Cloning of decidua prolactin from rhesus macaque.";
RL Biol. Reprod. 50:543-552(1994).
CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by
CC -1- promoting lactation.
CC -1- SUBCELLULAR LOCATION: secreted.
CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
CC
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CC removed.
CC
DR EMBL; U09018; AA18471.1; -; mRNA.
DR HSSP; P01236; INSD.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PRO0836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
DR Glycoprotein; Hormone; Lactation; Pituitary; signal.
FT SIGNAL 1 28 By similarity.
FT CHAIN 29 227 Prolactin.
FT CARBOHD 59 59 N-linked (GLNcnc. . .) (Potential).
FT DISULFD 32 39 By similarity.
FT DISULFD 86 202 By similarity.
FT DISULFD 219 227 By similarity.
SQ SEQUENCE 227 AA; 25972 MW; 1B6B25E087C401E4 CRC64;

Query Match 98.0%; Score 1021; DB 1; Length 227;
Best Local Similarity 97.5%; Pred. No. 6,1e-72;
Matches 194; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
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Qy 121 EOTRLLERMEILVSOVHPETKENEIYPVWSGLPSLOMADEBSRLSAYYNLLHCLRDSH 180
Db 149 EOTRLLERMEILVSOVHPETKENEIYPVWTGTPSLQMADEBSRLSAYYNLLHCLRDSH 208
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 209 KIDNYLKLKCRITIHNNNC 227

RESULT 6
Q52260_9PRIM PRELIMINARY; PRT; 217 AA.
ID_Q52260_9PRIM
AC Q52260;
DT 13-SEP-2005 (TREMBlrel. 31, Created)
DT 13-SEP-2005 (TREMBlrel. 31, Last sequence update)
DT 13-SEP-2005 (TREMBlrel. 31, Last annotation update)
DE Prolactin (Fragment).
GN Name=PRL;
OS Trachypithecus leucocephalus (white-headed langur).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Colobinae; Trachypithecus.
OX NCBI_TaxID=61617;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Li Y., Zhang Y.P.;
RT "Molecular evolution of prolactin gene in higher primate.";
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY851380; AAX99163.1; -; Genomic DNA.
DR EMBL; AY851377; AAX99163.1; JOINED; Genomic DNA.
DR EMBL; AY851378; AAX99163.1; JOINED; Genomic DNA.
DR EMBL; AY851379; AAX99163.1; JOINED; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PRO0836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
DR Hormone.
FT NON_TER 1 1
SQ SEQUENCE 217 AA; 24856 MW; 4F8FABFD66EB02B4 CRC64;

Query Match 97.7%; Score 1018; DB 2; Length 217;
Best Local Similarity 97.0%; Pred. No. 1e-71;
Matches 193; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
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DE prolactin.
OS Papio (baboon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheciidae; Cercopitheciinae.
OX NCBI_TaxID=9554;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=92037387; PubMed=1935793;
RA Cole E.S., Nichols E.H., Lauziere K., Edmunds T., McPherson J.M.;
RT "Characterization of the microheterogeneity of recombinant primate
  prolactin: implications for posttranslational modifications of the
  hormone in vivo.";
RL Endocrinology 129:2639-2646(1991).
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
DR HSBP; P01236; INSD.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone.
SQ SEQUENCE 199 AA; 22850 MW; 872A8935FEA43B67 CRC64;

Query Match 96.5%; Score 1006; DB 2; Length 199;
Best Local Similarity 96.0%; Pred. No. 7,9e-71;
Matches 191; Conservative 5; Mismatches 3; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRVAVLSHYTHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
DB 1 LPICGGAARCCVTLRDLFDRVAVLSHYTHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60

QY 61 SSLATPEDEKQAOQNOQKDFLSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 120
DB 61 SSLATPEDEKQAOQNOQKDFLSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 120

QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLSAYYNLHCLRRDSH 180
DB 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLSAYYNLHCLRRDSH 180

QY 181 KIDNYLKLKCRRIHNNNC 199
DB 181 KIDNYLKLKCRRIHNNNC 199

Db 181 KIDNYLKLKCRRIHNNNC 199

RESULT 8
052258 PITPI PRELIMINARY; PRT; 217 AA.
AC 052258
DT 13-SEP-2005 (TREMBlrel. 31, Created)
DT 13-SEP-2005 (TREMBlrel. 31, Last sequence update)
DT 13-SEP-2005 (TREMBlrel. 31, Last annotation update)
DE prolactin (Fragment).
GN Name=PRL;
OS Pithecia pithecia (White-faced saki).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini; Cebidae;
OC Pitheciinae; Pithecia.
OX NCBI_TaxID=43777;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Li Y., Zhang Y.P.;
RT "Molecular evolution of prolactin gene in higher primate.";
RL Submitted (DEC-2004) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY851388; AAX99162.1; -; Genomic DNA.
DR EMBL; AY851385; AAX99162.1; JOINED; Genomic DNA.
DR EMBL; AY851386; AAX99162.1; JOINED; Genomic DNA.
DR EMBL; AY851387; AAX99162.1; JOINED; Genomic DNA.
GO; GO:0005576; C:extracellular region; IEA.

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DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone.
FT NON TER.
SQ SEQUENCE 217 AA; 24757 MW; FDB0ACE784F93624 CRC64;

Query Match 95.4%; Score 994; DB 2; Length 217;
Best Local Similarity 95.0%; Pred. No. 7,6e-70;
Matches 189; Conservative 6; Mismatches 4; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRVAVLSHYTHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
DB 1 LPICGGAARCCVTLRDLFDRVAVLSHYTHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 78

QY 61 SSLATPEDEKQAOQNOQKDFLSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 120
DB 79 SSLATPEDEKQAOQNOQKDFLSLIVSILRSNNEPLVHLVTEVRGQEAPEALISRAVEIE 138

QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLSAYYNLHCLRRDSH 180
DB 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSLQMADESRSLSAYYNLHCLRRDSH 198

QY 181 KIDNYLKLKCRRIHNNNC 199
DB 181 KIDNYLKLKCRRIHNNNC 217

Db 181 KIDNYLKLKCRRIHNNNC 217

RESULT 9
06A190 CALJA PRELIMINARY; PRT; 217 AA.
AC 06A190;
DT 25-OCT-2004 (TREMBlrel. 28, Created)
DT 25-OCT-2004 (TREMBlrel. 28, Last sequence update)
DT 25-OCT-2004 (TREMBlrel. 28, Last annotation update)
DE prolactin precursor (Fragment).
GN Name=prl;
OS Callithrix jacchus (Common marmoset).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Platyrrhini;
OC Callitrichidae; Callitrix.
OX NCBI_TaxID=9483;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX PubMed=15983870; DOI=10.1007/s00239-004-0239-9;
RA Wallis O.C., Mac-Kwaahle A., Naki G., Wallis M.;
RT "Molecular evolution of prolactin in primates.";
RL J. Mol. Evol. 60:606-614(2005).
DR EMBL; AJ786353; CAH05221.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone; Signal.
FT SIGNAL.
FT CHAIN 19 217 Potential.
FT NON TER 1 prolactin.
SQ SEQUENCE 217 AA; 24843 MW; 342852DE9DC64B48 CRC64;

Query Match 93.0%; Score 969; DB 2; Length 217;
Best Local Similarity 91.0%; Pred. No. 6,9e-68;
Matches 181; Conservative 12; Mismatches 6; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRVAVLSHYTHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60

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DB 19 LPVCGGAIVRCQVTLRLDFBRAVLISHYIHNLSSEMFSEDPKRTQGRGFIKALNSCHT 78
QY 61 SSLATPEDKEQAQMNQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIVE 120
DB 79 SSLATPEDKEQAQISQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIEIE 138
QY 121 EQTKLLERMELIYQVHPETKENIYFVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
DB 139 EOSKRLLEGKELLISQVHPETRENAVYSVWSGLPSLQMADEBSRLFAVYNLLHCLRDSDH 198
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 199 KIDNYLKLKCRRIHNNNC 217

RESULT 10
06A1B8_NYCPY
ID 06A1B8_NYCPY PRELIMINARY; PRT; 220 AA.
AC 06A1B8;
DT 25-OCT-2004 (TREMBlrel. 28, Created)
DT 25-OCT-2004 (TREMBlrel. 28, Last sequence update)
DE 25-OCT-2004 (TREMBlrel. 28, Last annotation update)
DE prolactin precursor (Fragment).
CN Name:prl;
OS Nucleobus pygmaeus (Pygmy slow loris).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Strepsirrhini; Loridae;
OC Nucleobus.
OC Nucleobus.
OX NCBI_TaxID=101278;
RN [1]
NP NUCLEOTIDE SEQUENCE.
RP PubMed=15983870; DOI=10.1007/s00239-004-0239-9;
RX Wallis O.C., Mac-Kwashie A., Makri G., Wallis M.;
RT "Molecular evolution of prolactin in primates.";
RL J. Mol. Evol. 60:606-614 (2005).
DB EMBL; AJ784991; CAH05020.1; Genomic_DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Hormone; Signal.
FT SIGNAL <1> 21 Potential.
FT CHAIN 22 220 Prolactin.
FT NON_TER 1 1
SQ SEQUENCE 220 AA; 25214 MW; 03D1BF68BA177B6 CRC64;

Query Match 85.3%; Score 889; DB 2; Length 220;
Best Local Similarity 81.4%; Pred. No. 1.3e-61;
Matches 162; Conservative 23; Mismatches 14; Indels 0; Gaps 0;

QY 1 LPICGGAARCOVTLRLDFBRAVLISHYIHNLSSEMFSEDPKRTYHGRGFIKALNSCHT 60
DB 22 LPICGGAARCOVSLRLDFBRAVLISHYIHNLSSEMFSEDPKRYAOGRGFIKALNSCHT 81
QY 61 SSLATPEDKEQAQMNQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIVE 120
DB 82 SSLSTPEDKEQAQOIHHEDLNLVLRVLRSWNDPLYHLVTEVRGQGAPEALISKAIEIE 141
QY 121 EQTKLLERMELIYQVHPETKENIYFVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180
DB 142 EONKLLBEMEKIVGVHPRIRENEYSVWSGLPALQMADEBSRLFAVYNLLHCLRDSDH 201
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 202 KIDNYLKLKCRRIIYDSNC 220

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RESULT 11
PRL_CAMDR
ID PRL_CAMDR STANDARD; PRT; 199 AA.
AC P22393;
DT 01-AUG-1991 (Rel. 19, Created)
DT 01-AUG-1991 (Rel. 19, Last sequence update)
DT 10-MAY-2005 (Rel. 47, Last annotation update)
DE Prolactin (PRL).
CN Name=PRL;
OS Camelus dromedarius (Dromedary) (Arabian camel).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Tylopoda;
OC Camelidae; Camelus.
OX NCBI_TaxID=9838;
RN [1]
NP PROTEIN SEQUENCE, AND CARBOHYDRATE-LINKAGE SITE.
RP MEDLINE=91230144; PubMed=2029533; DOI=10.1016/0167-4838(91)90549-F;
RX Martinat N., Huet J.-C., Nespolious C., Combarnous Y.;
RA Martinat N., Huet J.-C.;
RT "Determination of the primary and secondary structures of the dromedary (Camelus dromedarius) prolactin and comparison with prolactins from other species";
RL Biochim. Biophys. Acta 1077:339-345 (1991).
RN [2]
NP PROTEIN SEQUENCE OF 1-40.
RP TISSUE=Pituitary;
RX PubMed=2085952;
RA Martinat N., Anouassi A., Huet J.C., Pernollet J.C., Combarnous Y.;
RT "Purification and characterization of glycosylated and non-glycosylated forms of prolactin from the dromedary (Camelus dromedarius).";
RT Comp. Biochem. Physiol. 97B:667-674 (1990).
RL Comp. Biochem. Physiol. 97B:667-674 (1990).
CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by promoting lactation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
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CC PIR; S15131; S15131.
DR HSSP; P01236; 1N9D.
DR InterPro; IPR012351; Cytokine_4_hlx.
DR InterPro; IPR001400; Somatotropin.
DR PANTHER; PTHR11417; Somatotropin; 1.
DR Pfam; PF00103; Hormone_1; 1.
DR PRINTS; PR00836; SOMATOTROPIN.
DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
KW Direct protein sequencing; Glycoprotein; Hormone; Lactation; Pituitary.
FT CARBOHYD 31 31 N-linked (GlcNAc . .); partial.
FT DISULFID 4 11
FT DISULFID 58 174
FT DISULFID 191 199
SQ SEQUENCE 199 AA; 22971 MW; EA382B98C4585B19 CRC64;

Query Match 84.4%; Score 879; DB 1; Length 199;
Best Local Similarity 80.9%; Pred. No. 7e-61;
Matches 161; Conservative 22; Mismatches 16; Indels 0; Gaps 0;

QY 1 LPICGGAARCOVTLRLDFBRAVLISHYIHNLSSEMFSEDPKRTYHGRGFIKALNSCHT 60
DB 1 LPICGGAARCOVSLRLDFBRAVLISHYIHNLSSEMFSEDPKRYAOGRGFIKALNSCHT 81
QY 61 SSLATPEDKEQAQMNQKDFLSLIVSLRSWNEPLYHLVTEVRGQGAPEALISKAIVE 120
DB 61 SSLSTPEDKEQAQOIHHEDLNLVLRVLRSWNDPLYHLVTEVRGQGAPEALISKAIEIE 120
QY 121 EQTKLLERMELIYQVHPETKENIYFVWSGLPSLQMADEBSRLSAVYNLLHCLRDSDH 180

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DB 121 EONKRLGEMEKIVQVHPGIVENETYSVSGLPISLOMADEDTRLFAFYNLHLCRRDSH 180
 QY 181 KIDNYLKILKCRRIHNNC 199
 DB 181 KIDNYLKILKCRRIYDSNC 199

RESULT 12

PRL_PIG STANDARD; PRT; 229 AA.
 ID PRL_PIG
 AC P01338;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 01-OCT-1994 (Rel. 30, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Proactin precursor (PRL).
 GN Name=PRL;
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
 OC Sub.
 OX NCBI_TaxID=9823;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA MEDLINE=89263739; PubMed=2726463;
 RA Schulz Aellen M.F., Schmid E., Moyva R.N.;
 RT "Nucleotide sequence of porcine preprolactin cDNA."
 RL Nucleic Acids Res. 17:3295-3295(1989).
 RN [2]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA MEDLINE=90262633; PubMed=2344390;
 RA Kato Y., Hirai T., Kato T.;
 RT "Molecular cloning of cDNA for porcine prolactin precursor."
 RL J. Mol. Endocrinol. 4:135-142(1990).
 RN [3]
 RP PROTEIN SEQUENCE OF 31-229.
 RA MEDLINE=76189476; PubMed=1270193;
 RA Li C.H.;
 RT "Studies on pituitary lactogenic hormone. The primary structure of the
 RT porcine hormone."
 RL Int. J. Pept. Protein Res. 8:205-224(1976).
 CC -1- FUNCTION: Proactin acts primarily on the mammary gland by
 CC promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC EMBL, X14068; CAA32231.1; -, mRNA.
 DR PIR; S04077; LCPG.
 DR HSSP; P01236; IN9D.
 DR InterPro; IPR012351; Cytokine_4_hlx.
 DR InterPro; IPR001400; Somatotropin.
 DR PANTHER; PTHR11417; Somatotropin; 1.
 DR Pfam; PF00103; Hormone 1; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.
 KW Direct protein sequencing; Glycoprotein; Hormone; Lactation;
 KW Pituitary; Signal.
 FT CHAIN 1 30
 FT PIR 31 229 Prolactin.
 FT CARBOHYD 61 61 N-linked (GlcNAc. .); partial.
 FT DISULFID 34 41
 FT DISULFID 88 204
 FT DISULFID 221 229
 FT CONFLICT 4 4
 FT CONFLICT 43 43 R -> T (in Ref. 1).
 FT CONFLICT 152 152 V -> M (in Ref. 1).
 FT CONFLICT 152 152 Q -> E (in Ref. 3).

FT CONFLICT 226 226 D -> N (in Ref. 3).
 SQ SEQUENCE 229 AA; 26141 MW; 908507EB6DA3B47 CRC64;

Query Match 83.7%; Score 872; DB 1; Length 229;
 Best Local Similarity 80.9%; Pred. No. 2.9e-60;
 Matches 161; Conservative 21; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGAGARCOQVTRDLPDRAVYVSHYTHNLSSEMFSPDRYTHRGFTTKAINSCHT 60
 DB 31 LPICPGAVNCOVSRDLPDRAVYVSHYTHNLSSEMFSPDRYTHRGFTTKAINSCHT 90
 QY 61 SSIATPEDEKQAOQNMOKDFLSIVSILRSWNEPLVHYTEVRGNGQEAPEALISRAVEIE 120
 DB 91 SSIATPEDEKQAOQHHEVLNLTILRVRSWNMDPLVHYTEVRGNGQEAPEALISRAVEIE 150
 QY 121 EGTKLEPMEILVSVQHPETKENETIYPWVSGLPISLOMADESRISAYTNLHLCRRDSH 180
 DB 151 EONKRLGEMEKIVQVHPGIVENETYSVSGLPISLOMADEDTRLFAFYNLHLCRRDSH 210
 QY 181 KIDNYLKILKCRRIHNNC 199
 DB 211 KIDNYLKILKCRRIYDSNC 229

RESULT 13

PRL_HORSE STANDARD; PRT; 229 AA.
 ID PRL_HORSE
 AC P12420; Q6UBP9;
 DT 01-OCT-1989 (Rel. 12, Created)
 DT 10-MAY-2005 (Rel. 47, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Proactin precursor (PRL).
 GN Name=PRL;
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RA TISSUE=Pituitary;
 RA MEDLINE=22627807; PubMed=12742553; DOI=10.1016/S0739-7240(03)00013-4;
 RA Clark R.J., Valdeirama X.P., Furlan M.A., Chedrese P.D.;
 RT "Cloning and nucleotide sequence of the equine and elk pituitary pre-
 RT prolactin cDNA."
 RL Domest. Anim. Endocrinol. 24:367-376(2003).
 RN [2]
 RP PROTEIN SEQUENCE OF 31-229.
 RA TISSUE=Pituitary;
 RA MEDLINE=88314465; PubMed=3045032;
 RA Lehman S.R., Lahm H.W., Medel M.C., Hulmes J.D., Li C.H.;
 RT "Primary structure of equine pituitary prolactin."
 RL Int. J. Pept. Protein Res. 31:544-554(1988).
 CC -1- FUNCTION: Proactin acts primarily on the mammary gland by
 CC promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC EMBL, AY373339; AAQ76548.1; -, mRNA.
 DR PIR; JK0016; LCHO.
 DR HSSP; P01236; IN9D.
 DR InterPro; IPR012351; Cytokine_4_hlx.
 DR InterPro; IPR001400; Somatotropin.
 DR PANTHER; PTHR11417; Somatotropin; 1.
 DR Pfam; PF00103; Hormone 1; 1.
 DR PRINTS; PR00836; SOMATOTROPIN.
 DR PROSITE; PS00266; SOMATOTROPIN_1; 1.
 DR PROSITE; PS00338; SOMATOTROPIN_2; 1.

KM Direct protein sequencing; Glycoprotein; Hormone; Lactation;
 KM Pituitary; Signal.
 FT SIGNAL 1 30
 FT CHAIN 31 229
 FT CARBOHYD 61 229
 FT DISULFID 34 41
 FT DISULFID 88 204
 FT DISULFID 221 229
 FT DISULFID 119 119
 FT CONFLICT 229 AA; 26256 MW; A7B891BA9ADE737C CRC64;
 SQ SEQUENCE

Query March 83.6%; Score 871; DB 1; Length 229;
 Best Local Similarity 79.9%; Pred. No. 3.5e-60;
 Matches 159; Conservative 23; Mismatches 17; Indels 0; Gaps 0;

QY 1 LPICPGNARCOVTLRDLFDRAVYLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
 DB 31 LPICPGNARCOVTLRDLFDRAVYLSHYIHNLSSEMFSEFDRKRYTHGRGFTTKAINSCHT 90

QY 61 SSLATPEDEKQAOQNMOKDFLSIVSLRSWNEPLVYLTVETVRGMQAPPAIISKAVEIE 120
 DB 91 SSLATPEDEKQAOQIHHEDLNLILRVLRSMNDPLVYLTVETVRGMQAPPAIISKAVEIE 150

QY 121 EQTKRLERMEIYVQVHPETKENETYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
 DB 151 EQTKRLERMEIYVQVHPETKENETYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 210

QY 181 KIDNYLKLKCRRIHNNNC 199
 DB 211 KIDNYLKLKCRRIYDNC 229

RESULT 14
 PRL_AITME STANDARD; PRT; 229 AA.
 ID PRL_AITME
 AC OSHX51;
 DT 10-MAY-2005 (Rel. 47, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Prolactin precursor (PRL).
 GN Name=PRL;
 OS Alluopoda melanoleuca (Giant panda).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Ursidae;
 OC Alluopoda.
 NC NCB1_TaxID=9646;
 RX NCB1_TaxID=9646;
 RP NUCLEOTIDE SEQUENCE [MRNA].
 RC TISSUE=Pituitary;
 RA Zheng X., Zhu M., Zhang Z.;
 RT "Cloning and expression of pituitary prolactin gene in Alluopoda melanoleuca."
 RL Submitted (Oct-2002) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
 CC -----
 CC EMBL; AY161285; AAN78320.1; -; mRNA.
 CC HSSP; P01236; 1N9D.
 CC InterPro; IPR012351; Cytokine_4_hlx.
 CC InterPro; IPR01400; Somatotropin.
 CC PANTHER; PTHR11417; Somatotropin; 1.
 CC Pfam; PF00103; Hormone 1; 1.
 CC PRINTS; PR00836; SOMATOTROPIN.
 CC PROSITE; PS00366; SOMATOTROPIN_1; 1.
 CC PROSITE; PS00338; SOMATOTROPIN_2; 1.
 CC DR

KM Hormone; Lactation; Pituitary; Signal.
 KM Pituitary; Signal.
 FT SIGNAL 1 30
 FT CHAIN 31 229
 FT DISULFID 34 41
 FT DISULFID 88 204
 FT DISULFID 221 229
 FT DISULFID 119 119
 FT CONFLICT 229 AA; 26236 MW; 441B3D748CFDDBC2 CRC64;
 SQ SEQUENCE

Query March 83.5%; Score 870; DB 1; Length 229;
 Best Local Similarity 79.4%; Pred. No. 4.2e-60;
 Matches 158; Conservative 25; Mismatches 16; Indels 0; Gaps 0;

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 DB 91 SSLATPEDEKQAOQIHHEDLNLILRVLRSMNDPLVYLTVETVRGMQAPPAIISKAVEIE 150

QY 121 EQTKRLERMEIYVQVHPETKENETYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
 DB 151 EQTKRLERMEIYVQVHPETKENETYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 210

QY 181 KIDNYLKLKCRRIHNNNC 199
 DB 211 KIDNYLKLKCRRIYDNC 229

RESULT 15
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 ID PRL_MUSVI
 AC P29234; O864R8;
 DT 01-DEC-1992 (Rel. 24, Created)
 DT 10-MAY-2005 (Rel. 47, Last sequence update)
 DT 10-MAY-2005 (Rel. 47, Last annotation update)
 DE Prolactin precursor (PRL).
 GN Name=PRL;
 OS Musetela vison (American mink).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae;
 OC Mustelinae; Mustela.
 NC NCB1_TaxID=9667;
 RX NCB1_TaxID=9667;
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RC Vardy T.L., Farid A.;
 RT "Nucleotide sequence variation of the mink preprolactin gene";
 RL Submitted (MAR-2003) to the EMBL/GenBank/DBJ databases.
 CC [2]
 CC NUCLEOTIDE SEQUENCE OF 37-229.
 CC MEDLINE=94140110; PubMed=8307350;
 CC Perelegina L.M., Baricheva E.M., Sebeleva T.E., Kokora V.A.;
 CC "The evolutionarily conserved gene Nc70F, expressed in nerve tissue of Drosophila melanogaster, encodes a protein homologous to the mouse delta transcription factor."
 CC Genetika 29:1597-1607(1993).
 CC [3]
 CC NUCLEOTIDE SEQUENCE [MRNA] OF 55-229.
 CC TISSUE=Pituitary;
 RA Bondar A.A., Golovin S.J., Mertvetsov N.P.;
 RT "Nucleotide sequence of mink prolactin mRNA from pituitary";
 RL Sibirskii Biol. Zh. 2:10-15(1993).
 CC -1- FUNCTION: Prolactin acts primarily on the mammary gland by promoting lactation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the somatotropin/prolactin family.
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
 CC -----
 CC EMBL; AF00103; Hormone 1; 1.
 CC PRINTS; PR00836; SOMATOTROPIN.
 CC PROSITE; PS00366; SOMATOTROPIN_1; 1.
 CC PROSITE; PS00338; SOMATOTROPIN_2; 1.
 CC DR

50	SEQUENCE	229 AA;	26194 MW;	D3MDD8616C8A398C	CRC64
FT	CHAIN	31	229		Prolectin.
FT	DISULFID	34	41		By similarity.
FT	DISULFID	88	204		By similarity.
FT	DISULFID	221	229		By similarity.
FT	CONFLICT	76	76		Q -> H (in Ref. 2).
FT	CONFLICT	190	190		D -> E (in Ref. 2).
FT	CONFLICT	226	226		D -> H (in Ref. 2).
KW	SIGNAL	1	30		Potential.
DR	Hormone, Lactation				Pituitary; Signal.
DR	PROSITE; PS00266;				SOMATOTROPIN 2; 1.
DR	PROSITE; PS00338;				SOMATOTROPIN 2; 1.
DR	PRINTS; PR00836;				SOMATOTROPIN.
DR	INTERPRO; IPR012351;				Cytokine_4.hlx.
DR	INTERPRO; IPR001400;				Somatotropin.
DR	PANTHER; PTHR11417;				Somatotropin; 1.
DR	Pfam; PF00103;				Hormone_1; 1
DR	PRINTS; PR00836;				SOMATOTROPIN.
DR	PROSITE; PS00266;				SOMATOTROPIN 1; 1.
DR	PROSITE; PS00338;				SOMATOTROPIN 2; 1.
DR	Hormone, Lactation				Pituitary; Signal.
FT	SIGNAL	1	30		Potential.
FT	CHAIN	31	229		Prolectin.
FT	DISULFID	34	41		By similarity.
FT	DISULFID	88	204		By similarity.
FT	DISULFID	221	229		By similarity.
FT	CONFLICT	76	76		Q -> H (in Ref. 2).
FT	CONFLICT	190	190		D -> E (in Ref. 2).
FT	CONFLICT	226	226		D -> H (in Ref. 2).
50	SEQUENCE	229 AA;	26194 MW;	D3MDD8616C8A398C	CRC64

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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:25:00 ; Search time 165 Seconds
(without alignments)
503.927 Million cell updates/sec

Title: US-09-815-306A-34

Perfect score: 1042
Sequence: 1 LPICPGGARCCVTLRLDLD.....HKIDNYLKLCRIIHNNC 199

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-Processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications_AA_Main:*

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- 2: /cgn2_6/prodata/1/pubppa/US08_PUBCOMB.pep:*
- 3: /cgn2_6/prodata/1/pubppa/US09_PUBCOMB.pep:*
- 4: /cgn2_6/prodata/1/pubppa/US10A_PUBCOMB.pep:*
- 5: /cgn2_6/prodata/1/pubppa/US10B_PUBCOMB.pep:*
- 6: /cgn2_6/prodata/1/pubppa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1042	100.0	200	4	US-10-449-609-1
2	1042	100.0	227	4	US-10-140-293-4
3	1042	100.0	365	4	US-10-449-609-6
4	1035	99.3	199	4	US-10-153-207-4
5	1035	99.3	200	3	US-09-819-094-9
6	1035	99.3	200	4	US-10-714-067-9
7	1035	99.3	227	3	US-09-815-306-1
8	1035	99.3	227	4	US-10-140-293-3
9	1035	99.3	227	4	US-10-291-172-226
10	1035	99.3	227	4	US-10-221-278-226
11	1031	98.9	228	3	US-09-065-330D-2
12	1023	98.2	199	4	US-10-140-293-12
13	1018.5	97.7	579	4	US-10-449-609-7
14	1018.5	97.7	942	4	US-10-449-609-8
15	887	85.1	199	4	US-10-140-293-24
16	879	84.4	199	4	US-10-140-293-21
17	873	83.8	199	4	US-10-140-293-22
18	857	82.1	199	4	US-10-140-293-16
19	855.5	82.1	199	4	US-10-140-293-10
20	848	81.4	199	4	US-10-140-293-20
21	784	75.2	199	4	US-10-140-293-18
22	774	74.3	199	4	US-10-140-293-19
23	768	73.7	199	4	US-10-140-293-28
24	767	73.6	199	4	US-10-140-293-29
25	764	73.3	199	4	US-10-140-293-17
26	752	72.2	210	4	US-10-424-599-276669
27	740	71.0	199	4	US-10-140-293-25

28	739	70.9	199	4	US-10-140-293-26	Sequence 26, Appl
29	739	70.9	199	4	US-10-140-293-27	Sequence 27, Appl
30	729	70.0	199	4	US-10-140-293-23	Sequence 23, Appl
31	718.5	69.0	258	4	US-10-291-172-602	Sequence 602, App
32	718.5	69.0	258	4	US-10-221-278-602	Sequence 602, App
33	697	66.9	140	3	US-09-819-094-11	Sequence 11, Appl
34	697	66.9	140	3	US-10-714-067-11	Sequence 11, Appl
35	697	66.9	143	3	US-09-819-094-12	Sequence 12, Appl
36	697	66.9	143	4	US-10-714-067-12	Sequence 12, Appl
37	694	66.6	199	4	US-10-140-293-31	Sequence 31, Appl
38	682.5	65.5	198	4	US-10-140-293-32	Sequence 32, Appl
39	655	62.9	197	4	US-10-140-293-13	Sequence 13, Appl
40	649	62.3	197	4	US-10-140-293-15	Sequence 15, Appl
41	630	60.5	125	4	US-10-036-869-25	Sequence 25, Appl
42	630	60.5	253	4	US-10-036-869-27	Sequence 27, Appl
43	626	60.1	124	3	US-09-819-094-10	Sequence 10, Appl
44	626	60.1	124	4	US-10-714-067-10	Sequence 10, Appl
45	604	58.0	197	4	US-10-140-293-14	Sequence 14, Appl

ALIGNMENTS

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RESULT 1
US-10-449-609-1
; Sequence 1, Application US/10449609
; Publication No. US20040127407A1
; GENERAL INFORMATION:
; APPLICANT: CHEN, MEN Y
; TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
; FILE REFERENCE: 035879-0163
; CURRENT APPLICATION NUMBER: US/10/449,609
; PRIOR FILING DATE: 2003-09-26
; PRIOR APPLICATION NUMBER: 60/384,121
; PRIOR FILING DATE: 2002-05-31
; NUMBER OF SEQ ID NOS: 45
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 200
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-449-609-1

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Best Local Similarity 100.0%; Pred. No. 2.5e-95;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB      2 LPICPGGARCCVTLRLDLDRAVYVLSHYTHNLSSEMFSEFDRKRYTGGRFTAINSCRT 61

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DB      62 SSILATEDKQAOQNNQKFLSLIVLSILRSWNEPLVHLVTEVGMQAPPAISKAVEIE 121

QY      121 EQTKRLRMELIVSOVHPETKENEIYPVWSGIPSLQMADESRISAYVNLICLRDSD 180
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DB      122 EQTKRLRMELIVSOVHPETKENEIYPVWSGIPSLQMADESRISAYVNLICLRDSD 181

QY      181 KIDNYLKLCRIIHNNC 199
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DB      182 KIDNYLKLCRIIHNNC 200

RESULT 2
US-10-140-293-4
; Sequence 4, Application US/10140293
; Publication No. US20030022833A1
; GENERAL INFORMATION:
; APPLICANT: CHEN, MEN Y
; APPLICANT: MAGNER, THOMAS E.
; TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PORLIFERATIVE
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; TITLE OF INVENTION: CONDITIONS
; FILE REFERENCE: 035879/0109
; CURRENT APPLICATION NUMBER: US/10/140,293
; CURRENT FILING DATE: 2002-05-08
; PRIOR APPLICATION NUMBER: US/09/246,041
; PRIOR FILING DATE: 1999-02-05
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 4
; LENGTH: 227
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-140-293-4

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Best Local Similarity 100.0%; Pred. No. 2.9e-95;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 89 SSLATPEDEKQAQOMNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEAILSKAVEIE 148
QY 121 EOTKRLERMEILVISOVHPETKENEIYPVWSGLPSIQMADEBSRLSAYYNLLHCLRRDSH 180
DB 149 EOTKRLERMEILVISOVHPETKENEIYPVWSGLPSIQMADEBSRLSAYYNLLHCLRRDSH 208
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 209 KIDNYLKLKCRITIHNNNC 227

RESULT 3
US-10-449-609-6
; Sequence 6, Application US/10449609
; Publication No. US20040127407a1
; GENERAL INFORMATION:
; APPLICANT: CHEN, WEN Y
; TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
; TITLE OF INVENTION: FUSION PROTEINS
; FILE REFERENCE: 035879-0163
; CURRENT APPLICATION NUMBER: US/10/449,609
; CURRENT FILING DATE: 2003-09-26
; PRIOR APPLICATION NUMBER: 60/384,121
; PRIOR FILING DATE: 2002-05-31
; NUMBER OF SEQ ID NOS: 45
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 6
; LENGTH: 385
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Fusion protein
US-10-449-609-6

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Best Local Similarity 100.0%; Pred. No. 6e-95;
Matches 199; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 122 EOTKRLERMEILVISOVHPETKENEIYPVWSGLPSIQMADEBSRLSAYYNLLHCLRRDSH 181
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QY 181 KIDNYLKLKCRITIHNNNC 199
DB 182 KIDNYLKLKCRITIHNNNC 200

RESULT 4
US-10-153-207-4
; Sequence 4, Application US/10153207
; Publication No. US20030153003A1
; GENERAL INFORMATION:
; APPLICANT: James A. Wells
; APPLICANT: Brian C. Cunningham
; TITLE OF INVENTION: GROWTH HORMONE VARIANTS
; FILE REFERENCE: 669.12-US-C7
; CURRENT APPLICATION NUMBER: US/10/153,207
; CURRENT FILING DATE: 2002-05-22
; PRIOR APPLICATION NUMBER: 08/479,884
; PRIOR FILING DATE: 1995-06-07
; PRIOR APPLICATION NUMBER: 08/190,723
; PRIOR FILING DATE: 1994-02-02
; PRIOR APPLICATION NUMBER: 07/960,227
; PRIOR FILING DATE: 1992-10-13
; PRIOR APPLICATION NUMBER: 07/875,204
; PRIOR FILING DATE: 1992-04-27
; PRIOR APPLICATION NUMBER: 07/428,066
; PRIOR FILING DATE: 1989-10-26
; PRIOR APPLICATION NUMBER: 07/264,611
; PRIOR FILING DATE: 1988-10-28
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 199
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-10-153-207-4

Query Match      99.3%; Score 1035; DB 4; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.2e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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DB 61 SSLATPEDEKQAQOMNQKDFSLIVSILRSWNEPLVHLVTEVRGQOAPPAEAILSKAVEIE 120
QY 121 EOTKRLERMEILVISOVHPETKENEIYPVWSGLPSIQMADEBSRLSAYYNLLHCLRRDSH 180
DB 121 EOTKRLERMEILVISOVHPETKENEIYPVWSGLPSIQMADEBSRLSAYYNLLHCLRRDSH 180
QY 181 KIDNYLKLKCRITIHNNNC 199
DB 181 KIDNYLKLKCRITIHNNNC 199

RESULT 5
US-09-819-094-9
; Sequence 9, Application US/09819094
; Publication No. US20030186382A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, Richard I.
; APPLICANT: Martini, Joseph A.
; APPLICANT: Struman, Ingrid
; APPLICANT: Taylor, Robert
; APPLICANT: Benziesen, Frauke
; TITLE OF INVENTION: No. US20030186382A1el Antiangiogenic Peptide Agents and Their
; FILE REFERENCE: UCSF-018/020S
; CURRENT APPLICATION NUMBER: US/09/819,094
; CURRENT FILING DATE: 2001-03-27
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;; PRIOR APPLICATION NUMBER: 09/076,675
;; PRIOR FILING DATE: 1998-05-12
;; PRIOR APPLICATION NUMBER: 60/046,394
;; PRIOR FILING DATE: 1997-05-12
;; NUMBER OF SEQ ID NOS: 34
;; SEQ ID NO 9
;; LENGTH: 200
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-819-094-9

Query Match 99.3%; Score 1035; DB 3; Length 200;
Best Local Similarity 99.5%; Pred. No. 1.2e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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DB 122 EOTKRLLEGMELIVSQVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 181
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 182 KIDNYLKLKCRRIHNNNC 200

RESULT 6
US-10-714-067-9
; Sequence 9, Application US/10714067
; Publication No. US20040077054A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, Richard I.
; APPLICANT: Martini, Joseph A.
; APPLICANT: Struman, Ingrid
; APPLICANT: Taylor, Robert
; APPLICANT: Bentzien, Frauke
; TITLE OF INVENTION: Novel Antiangiogenic Peptide Agents and Their
; FILE REFERENCE: UCSF-018/0205
; CURRENT APPLICATION NUMBER: US/10/714,067
; PRIOR FILING DATE: 2003-11-14
; PRIOR APPLICATION NUMBER: US/09/819,094
; PRIOR FILING DATE: 2001-03-27
; PRIOR APPLICATION NUMBER: 09/076,675
; PRIOR FILING DATE: 1998-05-12
; PRIOR APPLICATION NUMBER: 60/046,394
; PRIOR FILING DATE: 1997-05-12
; NUMBER OF SEQ ID NOS: 34
; SEQ ID NO 9
; LENGTH: 200
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-714-067-9

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Best Local Similarity 99.5%; Pred. No. 1.2e-94;
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DB 122 EOTKRLLEGMELIVSQVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 181
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 182 KIDNYLKLKCRRIHNNNC 200

RESULT 7
US-09-815-306-1
; Sequence 1, Application US/09815306
; Patent No. US20020068043A1
; GENERAL INFORMATION:
; APPLICANT: CHEN, MEN Y.
; APPLICANT: WAGNER, THOMAS E.
; TITLE OF INVENTION: BI-FUNCTIONAL CANCER TREATMENT AGENTS
; FILE REFERENCE: 035879/0120
; CURRENT APPLICATION NUMBER: US/09/815,306
; PRIOR FILING DATE: 2001-03-23
; PRIOR APPLICATION NUMBER: 60/191,457
; PRIOR FILING DATE: 2000-03-23
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 227
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-815-306-1

Query Match 99.3%; Score 1035; DB 3; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 LPICPGAARCCQVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 60
DB 29 LPICPGAARCCQVTLRLDFRAVLSHYIHNLSSEMFSEFDKRYTHGRGFTTAINSCHT 88
QY 61 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVRGQGEAPALISKAVEIE 120
DB 89 SSLATPEDEKQAOQNMOKDFLSLIVSLRSWNEPLVHLVTEVRGQGEAPALISKAVEIE 148
QY 121 EOTKRLLEGMELIVSQVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 180
DB 149 EOTKRLLEGMELIVSQVHPETKENETIYPWMSGLPISLOMADEBSRLSAYYNLHCLRDSDH 208
QY 181 KIDNYLKLKCRRIHNNNC 199
DB 209 KIDNYLKLKCRRIHNNNC 227

RESULT 8
US-10-140-293-3
; Sequence 3, Application US/10140293
; Publication No. US20030022833A1
; GENERAL INFORMATION:
; APPLICANT: WAGNER, THOMAS E.
; APPLICANT: CHEN, MEN Y.
; TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PROLIFERATIVE
; FILE REFERENCE: 035879/0109
; CURRENT APPLICATION NUMBER: US/10/140,293
; PRIOR FILING DATE: 2002-05-08
; PRIOR APPLICATION NUMBER: US/09/246,041
; PRIOR FILING DATE: 1999-02-05
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 227
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-140-293-3

Query Match 99.3%; Score 1035; DB 4; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICPGGAAACQVTLRDLFDRAVVLISHYIHNLSSEMFSEPDKRYTHGRTTKAINSCHT 60
Db 29 LPICPGGAAACQVTLRDLFDRAVVLISHYIHNLSSEMFSEPDKRYTHGRTTKAINSCHT 88
Qy 61 SSLATPBDKEQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 120
Db 89 SSLATPBDKEQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIYQVHPETKENIYFPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLERMELIYQVHPETKENIYFPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 209 KIDNYLKLKCRITIHNNNC 227

RESULT 9
US-10-291-172-226

Sequence 226, Application US/10291172
Publication No. US20030228584A1
GENERAL INFORMATION:

APPLICANT: Hyseq, Inc
TITLE OF INVENTION: No. US20030228584A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 21272-045
CURRENT APPLICATION NUMBER: US/10/291,172
CURRENT FILING DATE: 2000-11-08
PRIOR APPLICATION NUMBER: 09/693,267
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 09/665,363
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 09/616,847
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: 09/596,193
PRIOR FILING DATE: 2000-06-17
PRIOR APPLICATION NUMBER: 09/574,454
PRIOR FILING DATE: 2000-05-19
PRIOR APPLICATION NUMBER: 09/519,705
PRIOR FILING DATE: 2000-03-07
NUMBER OF SEQ ID NOS: 752
SEQ ID NO 226
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-291-172-226

Query Match 99.3%; Score 1035; DB 4; Length 227;

Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICPGGAAACQVTLRDLFDRAVVLISHYIHNLSSEMFSEPDKRYTHGRTTKAINSCHT 60
Db 29 LPICPGGAAACQVTLRDLFDRAVVLISHYIHNLSSEMFSEPDKRYTHGRTTKAINSCHT 88
Qy 61 SSLATPBDKEQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 120
Db 89 SSLATPBDKEQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIYQVHPETKENIYFPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLERMELIYQVHPETKENIYFPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 209 KIDNYLKLKCRITIHNNNC 227

RESULT 10

US-10-221-278-226
Sequence 226, Application US/10221278

Publication No. US20040034208A1
GENERAL INFORMATION:

APPLICANT: Hyseq, Inc
TITLE OF INVENTION: No. US20040034208A1el Nucleic Acids and Polypeptides
FILE REFERENCE: 21272-045
CURRENT APPLICATION NUMBER: US/10/221,278
CURRENT FILING DATE: 2002-09-06
PRIOR APPLICATION NUMBER: 09/693,267
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 09/665,363
PRIOR FILING DATE: 2000-09-19
PRIOR APPLICATION NUMBER: 09/616,847
PRIOR FILING DATE: 2000-07-14
PRIOR APPLICATION NUMBER: 09/596,193
PRIOR FILING DATE: 2000-06-17
PRIOR APPLICATION NUMBER: 09/574,454
PRIOR FILING DATE: 2000-05-19
PRIOR APPLICATION NUMBER: 09/519,705
PRIOR FILING DATE: 2000-03-07
NUMBER OF SEQ ID NOS: 752
SEQ ID NO 226
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-221-278-226

Query Match 99.3%; Score 1035; DB 4; Length 227;

Best Local Similarity 99.5%; Pred. No. 1.5e-94;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICPGGAAACQVTLRDLFDRAVVLISHYIHNLSSEMFSEPDKRYTHGRTTKAINSCHT 60
Db 29 LPICPGGAAACQVTLRDLFDRAVVLISHYIHNLSSEMFSEPDKRYTHGRTTKAINSCHT 88
Qy 61 SSLATPBDKEQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 120
Db 89 SSLATPBDKEQAQOMNQKDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIYQVHPETKENIYFPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 180
Db 149 EOTKRLERMELIYQVHPETKENIYFPVWSGLPSLQMADEESRLSAVYNLLHCLRDSDH 208
Qy 181 KIDNYLKLKCRITIHNNNC 199
Db 209 KIDNYLKLKCRITIHNNNC 227

RESULT 11
US-09-065-330D-2

Sequence 2, Application US/09065330D
Publication No. US2001003662A1
GENERAL INFORMATION:

APPLICANT: WALKER, Ameae M.
TITLE OF INVENTION: PROLACTIN ANTAGONISTS AND USES THEREOF
FILE REFERENCE: 39754-0611-1CPLCP
CURRENT APPLICATION NUMBER: US/09/065,330D
CURRENT FILING DATE: 1998-04-23
PRIOR APPLICATION NUMBER: PCT/US97/01435
PRIOR FILING DATE: 1997-01-30
PRIOR APPLICATION NUMBER: US 08/594,809
PRIOR FILING DATE: 1996-01-31
NUMBER OF SEQ ID NOS: 6
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 2
LENGTH: 228
TYPE: PRT
ORGANISM: Homo sapiens

FEATURES:
NAME/KEY: VARIANT

LOCATION: 208
OTHER INFORMATION: Site mutated amino acid residue where the normal
OTHER INFORMATION: codon coding for serine is modified preferably to encode
OTHER INFORMATION: for aspartate or glutamate, most preferably

OTHER INFORMATION: asparate.
US-09-065-330D-2

Query Match 98.9%; Score 1031; DB 3; Length 228;
Best Local Similarity 99.0%; Pred. No. 3.7e-94;
Matches 197; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 30 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 89
QY 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
DB 90 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 149
QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
DB 150 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 209
QY 181 KIDNYLKLLKCRILIHNNC 199
DB 210 KIDNYLKLLKCRILIHNNC 228

RESULT 12

US-10-140-293-12
Sequence 12, Application US/10140293
Publication No. US20030022833A1

GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y.
APPLICANT: WAGNER, THOMAS E.
TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PDLIPERATIVE
FILE REFERENCE: 035879/0109
CURRENT APPLICATION NUMBER: US/10/140,293
CURRENT FILING DATE: 2002-05-08
PRIOR APPLICATION NUMBER: US/09/246,041
PRIOR FILING DATE: 1999-02-05
NUMBER OF SEQ ID NOS: 42
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 12
LENGTH: 199
TYPE: PRT
ORGANISM: Homo sapiens
US-10-140-293-12

Query Match 98.2%; Score 1023; DB 4; Length 199;
Best Local Similarity 98.0%; Pred. No. 1.9e-93;
Matches 195; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 1 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
DB 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
QY 181 KIDNYLKLLKCRILIHNNC 199
DB 181 KIDNYLKLLKCRILIHNNC 199

RESULT 13

US-10-449-609-7
Sequence 7, Application US/10449609
Publication No. US20040127407A1
GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y

TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
FILE REFERENCE: 035879-0163
CURRENT APPLICATION NUMBER: US/10/449,609
CURRENT FILING DATE: 2003-09-26
PRIOR APPLICATION NUMBER: 60/384,121
PRIOR FILING DATE: 2002-05-31
NUMBER OF SEQ ID NOS: 45
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 7
LENGTH: 579
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Fusion protein
US-10-449-609-7

Query Match 97.7%; Score 1018.5; DB 4; Length 579;
Best Local Similarity 99.0%; Pred. No. 2.3e-92;
Matches 197; Conservative 0; Mismatches 1; Indels 1; Gaps 1;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 2 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
QY 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
DB 121 EOTKRLERMEILVQVHPETKENEIYPVWSGLPSIQMADEESRLSAYYNLHCLRRDSH 180
QY 181 KIDNYLKLLKCRILIHNNC 199
DB 181 KIDNYLKLLKCRILIHNNC 199

RESULT 14

US-10-449-609-8
Sequence 8, Application US/10449609
Publication No. US20040127407A1

GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y
TITLE OF INVENTION: HUMAN PROLACTIN ANTAGONIST-ANGIOGENESIS INHIBITOR
FILE REFERENCE: 035879-0163
CURRENT APPLICATION NUMBER: US/10/449,609
CURRENT FILING DATE: 2003-09-26
PRIOR APPLICATION NUMBER: 60/384,121
PRIOR FILING DATE: 2002-05-31
NUMBER OF SEQ ID NOS: 45
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 8
LENGTH: 942
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Fusion protein
US-10-449-609-8

Query Match 97.7%; Score 1018.5; DB 4; Length 942;
Best Local Similarity 99.0%; Pred. No. 4.4e-92;
Matches 197; Conservative 0; Mismatches 1; Indels 1; Gaps 1;

QY 1 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
DB 2 LPICGGAARCCVTLRDLFDRAVVLSTYIHNLSSSEMFSEFDKRYTHGRGFTITKAINSCHT 60
QY 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120
DB 61 SSLATPEDEKQAQNMNQDFLSLIVSILRSWNEPLVHLVTEVRGMOEAPAILSKAVEIE 120

Qy	121	EOTKLLBEMELIVSOVHETKENELYPWSGPLSQMDDEBSRLSAYNYLHLCRLDSH	180
Db	121	EOTKLLBEMELIVSGVPEETKENELYPWSGPLSQMDDEBSRLSAYNYLHLCRLDSH	180
Qy	181	KIDNYLKLLKCR1IHNNNC	199
Db	181	KIDNYLKLLKCR1IHNNNC	199

RESULT 15
US-10-140

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US-10-140-293-24
Sequence 24, Application US/1014023
Publication No. US20030022833A1
GENERAL INFORMATION:
APPLICANT: CHEN, MEN Y.
TITLE OF INVENTION: USE OF ANTI-PROLACTIN AGENTS TO TREAT PROLIFERATIVE
TITLE OF INVENTION: CONDITIONS
FILE REFERENCE: 035879/0109
CURRENT APPLICATION NUMBER: US/10/140,293
CURRENT FILING DATE: 2002-05-08
PRIOR APPLICATION NUMBER: US/09/246,041
PRIOR FILING DATE: 1999-02-05
NUMBER OF SEQ ID NOS: 42
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 24
LENGTH: 199
TYPE: PR1
ORGANISM: Unknown Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Ancestral mammal
US-10-140-293-24

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Query Match	85.1%;	Score 887;	DB 4;	Length 199;
Best Local Similarity	82.9%;	Pred. No. 6.8e-80;		
Matches 165;	Conservative 17;	Mismatches 17;	Indels 0;	Gaps 0;

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QY 1 LPICGGAARCOVTLRLDFDRAVVLSHYIHNLSSEMFSEBPKRYTHRGGITAINSCHT 60
Db 1 LPICGGAANCCVSLDLDFDRAVILSHYIHNLSSEMFNEBPKRYAAGRGITAINSCHT 60
QY 61 SLSLPEDEXEOAQQNQKDFLSLVSILKSWNEPLVHLVTEVGMQEAPEALISKVETE 120
Db 61 SLSLTPEDEXEQAOQHIEVILNIIIGLILSKMNDPLVHLVTEVGMQEAPEALISRAIEE 120
QY 121 EOTKRLLEMMELIVSQVBPETKENETIYVWSGLPSIQMADEESRLSAYVNLHLCLRRDSH 180
Db 121 EENKRLLEEMEKIVGVHPGAKENETIYVWSGLPSIQMADEEDSRLFAFYVNLHCLRRDSH 180
QY 181 KIDNYLKLKCRILHNHNC 199
Db 181 KIDNYLKLKCRILYNNNC 199
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Search completed: January 6, 2006, 14:36:42
Job time : 166 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 6, 2006, 14:28:31 ; Search time 13 Seconds
(without alignments)
129.914 Million cell updates/sec

Title: US-09-815-306A-34
Perfect score: 1042
Sequence: 1 LPICPGGARCVTLRDLPD.....HKIDNYLKLKCRRIHNNC 199

Scoring table:
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Gapop 10.0 , Gapext 0.5

Searched: 61072 seqs, 8486849 residues

Total number of hits satisfying chosen parameters: 61072

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA New:*

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2: /cgn2_6/ptodata/2/pubppaa/US06_NEW_PUB.pep:*
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8: /cgn2_6/ptodata/2/pubppaa/US60_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1035	99.3	199	US-10-735-594-1	Sequence 1, Appl
2	1035	99.3	200	US-10-735-594-4	Sequence 4, Appl
3	1035	99.3	227	US-10-735-594-3	Sequence 3, Appl
4	1035	99.3	227	US-10-821-234-1633	Sequence 1633, Ap
5	1038	29.6	224	US-10-954-468-34	Sequence 25, Appl
6	1038	19.0	286	US-10-954-468-25	Sequence 25, Appl
7	1038	19.0	287	US-10-954-468-17	Sequence 17, Appl
8	1038	19.0	287	US-10-954-468-24	Sequence 24, Appl
9	1038	19.0	288	US-10-954-468-22	Sequence 20, Appl
10	1038	19.0	288	US-10-954-468-23	Sequence 22, Appl
11	1038	19.0	288	US-10-954-468-19	Sequence 23, Appl
12	1038	19.0	289	US-10-954-468-19	Sequence 19, Appl
13	1038	19.0	289	US-10-954-468-21	Sequence 21, Appl
14	1038	19.0	290	US-10-954-468-18	Sequence 18, Appl
15	1038	19.0	293	US-10-954-468-14	Sequence 14, Appl
16	1038	19.0	515	US-10-954-468-33	Sequence 33, Appl
17	1038	19.0	516	US-10-954-468-32	Sequence 32, Appl
18	1038	19.0	517	US-10-954-468-16	Sequence 16, Appl
19	1038	19.0	518	US-10-954-468-31	Sequence 31, Appl
20	1038	19.0	519	US-10-954-468-30	Sequence 30, Appl
21	1038	19.0	520	US-10-954-468-13	Sequence 13, Appl
22	1038	19.0	756	US-10-954-468-15	Sequence 15, Appl
23	1038	19.0	756	US-10-954-468-27	Sequence 27, Appl
24	1038	19.0	758	US-10-954-468-28	Sequence 28, Appl
25	1038	19.0	759	US-10-954-468-12	Sequence 12, Appl

26	198	19.0	759	6	US-10-954-468-26	Sequence 26, Appl
27	198	19.0	759	6	US-10-954-468-29	Sequence 29, Appl
28	190	18.2	191	7	US-11-033-365-160	Sequence 160, App
29	190	18.2	192	7	US-11-033-365-159	Sequence 159, App
30	190	18.2	192	7	US-11-033-365-198	Sequence 198, App
31	190	18.2	192	7	US-11-033-365-200	Sequence 200, App
32	190	18.2	192	7	US-11-187-552-1	Sequence 1, Appl
33	190	18.2	193	7	US-11-033-365-196	Sequence 196, App
34	190	18.2	196	7	US-11-033-365-199	Sequence 199, App
35	189.5	18.2	202	7	US-11-144-889A-2	Sequence 2, Appl
36	187	17.9	192	7	US-11-033-365-197	Sequence 197, App
37	105	10.1	133	6	US-10-821-234-1224	Sequence 1224, App
38	89.5	8.6	739	7	US-11-078-189-12	Sequence 12, Appl
39	86	8.3	708	7	US-11-174-150-25	Sequence 25, Appl
40	86	8.3	736	7	US-11-174-150-26	Sequence 26, Appl
41	85	8.2	143	6	US-10-821-234-1205	Sequence 1205, App
42	84.5	8.1	703	7	US-11-078-189-13	Sequence 13, Appl
43	83.5	8.0	825	7	US-11-078-189-20	Sequence 20, Appl
44	82	7.9	736	7	US-11-078-189-9	Sequence 9, Appl
45	81.5	7.8	626	7	US-11-082-389-392	Sequence 392, App

ALIGNMENTS

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RESULT 1
US-10-735-594-1
; Sequence 1, Application US/10735594
; Publication No. US20050250689A1
; GENERAL INFORMATION:
; APPLICANT: BROOKS, CHARLES L.
; APPLICANT: PETERSON, FRANCIS C.
; TITLE OF INVENTION: ANTAGONISTS FOR HUMAN PROLACTIN
; FILE REFERENCE: 18525-04051
; CURRENT FILING DATE: 2003-12-12
; PRIOR APPLICATION NUMBER: 60/433,370
; PRIOR FILING DATE: 2002-12-13
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: Patentin Ver. 3.2
; SEQ ID NO 1
; LENGTH: 199
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-735-594-1

Query Match      99.3%; Score 1035; DB 6; Length 199;
Best Local Similarity 99.5%; Pred. No. 1.1e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 LPICPGGARCVTLRDLPDRAVVLISHYTHNLSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
      |||||||
DB      1 LPICPGGARCVTLRDLPDRAVVLISHYTHNLSEMFSEFDRKRYTHGRGFTTKAINSCHT 60
      |||||||

QY      61 SSIATPEDKEAQOMQKDFLSILISILSNMPEPLVLTVEYRGQAEPAILSKAVEIE 120
      |||||||
DB      61 SSIATPEDKEAQOMQKDFLSILISILSNMPEPLVLTVEYRGQAEPAILSKAVEIE 120
      |||||||

QY      121 EOTKRLLEMEILVSGVHEETKENETYPVWSGLPSIQMADEBSRLSAYTNLHCLRDH 180
      |||||||
DB      121 EOTKRLLEMEILVSGVHEETKENETYPVWSGLPSIQMADEBSRLSAYTNLHCLRDH 180
      |||||||

QY      181 KIDNYLKLKCRRIHNNC 199
      |||||||
DB      181 KIDNYLKLKCRRIHNNC 199
      |||||||

RESULT 2
US-10-735-594-4
; Sequence 4, Application US/10735594
; Publication No. US20050250689A1
; GENERAL INFORMATION:
; APPLICANT: BROOKS, CHARLES L.
```

APPLICANT: PETERSON, FRANCIS C.
TITLE OF INVENTION: ANTAGONISTS FOR HUMAN PROLACTIN
FILE REFERENCE: 18525-04051
CURRENT APPLICATION NUMBER: US/10/735,594
CURRENT FILING DATE: 2003-12-12
PRIOR APPLICATION NUMBER: 60/433,370
PRIOR FILING DATE: 2002-12-13
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO 4
LENGTH: 200
TYPE: PRT
ORGANISM: Homo sapiens
US-10-735-594-4

Query Match 99.3%; Score 1035; DB 6; Length 200;
Best Local Similarity 99.5%; Pred. No. 1.1e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAGARCVTLRDLFDRVAVLSHTYHNLSSEMFSEFDRKRYTHGFGFTTKAINSCHT 60
Db 2 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGFGFTTKAINSCHT 61
Qy 61 SSLATPEDEKQAOQNMOKDFSLIVSILRSWNEPLVYHLYTEVRGQGEAPEALISKAVEIE 120
Db 62 SSLATPEDEKQAOQNMOKDFSLIVSILRSWNEPLVYHLYTEVRGQGEAPEALISKAVEIE 121
Qy 121 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAYYNLLHCLRDSDH 180
Db 122 EOTKRLLEGMELIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAYYNLLHCLRDSDH 181
Qy 181 KIDNYLKLKCRITIHNNC 199
Db 182 KIDNYLKLKCRITIHNNC 200

RESULT 3
US-10-735-594-3
Sequence 3, Application US/10735594
Publication No. US20050250689A1
GENERAL INFORMATION:
APPLICANT: BROOKS, CHARLES L.
APPLICANT: PETERSON, FRANCIS C.
TITLE OF INVENTION: ANTAGONISTS FOR HUMAN PROLACTIN
FILE REFERENCE: 18525-04051
CURRENT APPLICATION NUMBER: US/10/735,594
CURRENT FILING DATE: 2003-12-12
PRIOR APPLICATION NUMBER: 60/433,370
PRIOR FILING DATE: 2002-12-13
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn Ver. 3.2
SEQ ID NO 3
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-735-594-3

Query Match 99.3%; Score 1035; DB 6; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.3e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 LPICGGAGARCVTLRDLFDRVAVLSHTYHNLSSEMFSEFDRKRYTHGFGFTTKAINSCHT 60
Db 29 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGFGFTTKAINSCHT 88
Qy 61 SSLATPEDEKQAOQNMOKDFSLIVSILRSWNEPLVYHLYTEVRGQGEAPEALISKAVEIE 120
Db 89 SSLATPEDEKQAOQNMOKDFSLIVSILRSWNEPLVYHLYTEVRGQGEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAYYNLLHCLRDSDH 180
Db 149 EOTKRLLEGMELIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAYYNLLHCLRDSDH 208

Qy 181 KIDNYLKLKCRITIHNNC 199
Db 209 KIDNYLKLKCRITIHNNC 227

RESULT 4
US-10-821-234-1633
Sequence 1633, Application US/10821234
Publication No. US20050255114A1
GENERAL INFORMATION:
APPLICANT: Labat, Ivan
APPLICANT: Stache-Crain, Birgit
APPLICANT: Andarmanli, Susan
APPLICANT: Tang, Y. Tom
TITLE OF INVENTION: Methods for Diagnosis and Treatment of Preeclampsia
FILE REFERENCE: 821A
CURRENT APPLICATION NUMBER: US/10/821,234
CURRENT FILING DATE: 2004-04-07
PRIOR APPLICATION NUMBER: US 60/462,047
PRIOR FILING DATE: 2003-04-07
NUMBER OF SEQ ID NOS: 1704
SOFTWARE: PC_SEQ_genes Version 1.0
SEQ ID NO 1633
LENGTH: 227
TYPE: PRT
ORGANISM: Homo sapiens
US-10-821-234-1633

Query Match 99.3%; Score 1035; DB 6; Length 227;
Best Local Similarity 99.5%; Pred. No. 1.3e-89;
Matches 198; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGFGFTTKAINSCHT 60
Db 29 LPICGGAGARCVTLRDLFDRVAVLSHYIHNLSSEMFSEFDRKRYTHGFGFTTKAINSCHT 88
Qy 61 SSLATPEDEKQAOQNMOKDFSLIVSILRSWNEPLVYHLYTEVRGQGEAPEALISKAVEIE 120
Db 89 SSLATPEDEKQAOQNMOKDFSLIVSILRSWNEPLVYHLYTEVRGQGEAPEALISKAVEIE 148
Qy 121 EOTKRLERMELIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAYYNLLHCLRDSDH 180
Db 149 EOTKRLLEGMELIVSQVHPETKENEIYPVWSGLPSLQMADEBSRLSAYYNLLHCLRDSDH 208
Qy 181 KIDNYLKLKCRITIHNNC 199
Db 209 KIDNYLKLKCRITIHNNC 227

RESULT 5
US-10-954-468-34
Sequence 34, Application US/10954468
Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glaes, David J.
TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
FILE REFERENCE: REG 1070A
CURRENT APPLICATION NUMBER: US/10/954,468
CURRENT FILING DATE: 2004-10-01
PRIOR APPLICATION NUMBER: 60/507,168
PRIOR FILING DATE: 2003-09-30
PRIOR APPLICATION NUMBER: 60/516,806
PRIOR FILING DATE: 2003-11-03
PRIOR APPLICATION NUMBER: 60/529,826
PRIOR FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: 60/534,654
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/534,819
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/554,640
PRIOR FILING DATE: 2004-03-19
PRIOR APPLICATION NUMBER: 60/573,525
PRIOR FILING DATE: 2004-05-21

```

: PRIOR APPLICATION NUMBER: 60/581,833
: PRIOR FILING DATE: 2004-06-22
: PRIOR APPLICATION NUMBER: 60/584,956
: PRIOR FILING DATE: 2004-07-02
: NUMBER OF SEQ ID NOS: 54
: SOFTWARE: FASTSEQ for Windows Version 4.0
: SEQ ID NO 34
: LENGTH: 224
: TYPE: PRT
: ORGANISM: homo sapien
US-10-954-468-34

```

Query Match	29.6%;	Score 308;	DB 6;	Length 224;
Best Local Similarity	33.8%;	Pred. No. 6.9e-22;		
Matches 67;	Conservative 43;	Mismatches 84;	Indels 4;	Gaps 1.

```

QY      2 P1CPGGAARCOVLTLDLPRAVVLISYIHNLSSEMSSEDPKRTTHRGFTTKINSCHTS 61
Db      31 PFCAMRNGRCFFSFPEDTFELAGSLSHNISIEVSELTPEEKHYSNVSGLRDKSPMCNCTS 90

QY      62 SLATEDPEQAOQOMNOKDFLSLIVSLRSWNEBLYHLVTEVRGMOEAPRALSKAVEIEE 121
Db      91 FLPTFENKQOALTHYSALLKSGAMILLDAMESPLDLDVSELSTIKVNPDIISKATDIKK 150

QY      122 QTKRLIERMELIVSQVHPETKENELIPVWSGLPGLQMADEBSLSAYTNLHCLLRDSSH 161
Db      151 KINAARNGVNAALMSTYLQNGDEBKONPAW----FLQSDNEDARIHSLYGMISCLDNDFFK 206

QY      182 IDNYLKLKLCRIIHNHNNC 199
Db      207 VDIYLANVLKCYMLKIDNC 224

```

RESULT 6
US-10-954-468-25

Sequence 25, Application US/10954468
Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glass, David J.
TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
FILE REFERENCE: REG 1070A
CURRENT APPLICATION NUMBER: US/10/954,468

```

Mon Jan 9 10:52:50 2006
US-09-

; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 34
; LENGTH: 224
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-34

Query Match 29.6%; Score 308, DB 6; Length 224;
Best Local Similarity 33.8%; Pred. No. 6,9e-22;
Matches 67; Conservative 43; Mismatches 84; Indels 4; Gaps 1;

QY 2 PICGGAGARCQVTLRDLFDRAVLVSHYTHNLSSMFSEFDRYHGRGFTKALNSQHTS 61
   |::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 31 PFCAMRNGRCWSPEDFTFLGSLSHNISIVSELFTEFEKHYSNVSGLRDQSPMRCNTS 90
   |||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

QY 62 SLATPEDKEAQOQNMNQKQFLSLIVSLRSWNEPLYTLVTEVRGQEAPEALISRAVEIEE 121
   |||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 91 FLPPENKEQARLTHYSALLKSGMILDAWSEPLDDIVSELSTIKNVPDIIISKATYIK 150
   |||::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

QY 122 QTKRLERMELIVSQVHPETKEKEIYPVWSGLPSIQWAEESRLSAYYNLIHCLRDSSH 181
   ::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 151 KINAVRNGVNALMSTWMLQNGDEKKNPAM----FLQSDNEARLHSLYGMISCLDNPFK 206
   ::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

QY 182 IDNYIKLIKCRIIHNHNC 199
   ::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|
Db 207 VDIYLVNLKCYMLKIDNC 224
   ::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|

RESULT 6
US-10-954-468-25
; Sequence 25, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaxo, David J
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; CURRENT FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FASTSEQ for Windows Version 4.0
; SEQ ID NO 25
; LENGTH: 286
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-25

```

```

OY  IPIRCGAARQCVNTRDLEFBAVULSHYIHNLSMSMFEDKRY---THRGGITAINIS 57
Dh  LPMIOEGSAPFTTIPSLRFLPDNNMLAHRKHQJLAFPTTQGFEEBAIYIPKEOKSYFLQNPORS 77
OY  58 -CHTSSLATPEDKEAOQOMQOKDFLSLIVSILRSNNEPLVHLVTE-----YRMOEAPEA 111
Dh  78 LCFSSSITPTPSNRBEFTQKSNLELLRISLILIQSWLPEVQFRLSRVANSILVYGASDSNVY 137
OY  112 ILSKAVELIEEQTALLERME-----LIVGVHETKENELIYVWSGILPSIQMADEESR 164
Dh  138 DLLK--DLBEGIQTMGRLEDOGSPRTGOIFKQYTSKFDTN-----SHNDDA 181
OY  165 LSAYYNLLHCLARDSHKIDNYLKLKCRPIIHNN 197
Dh  182 LLKAYGGLYCFRKMDYVETFLRIYQCSVBEES 214

```

```

RESULT 7
US-10-954-468-17
; Sequence 17, Application US/10954468
; Publication No. US20050287151A1
;
GENERAL INFORMATION:
; APPLICANT: Glass, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; CURRENT FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 287
; TYPE: prt
; ORGANISM: homo sapien
; US-10-954-468-17

```

Query Match	19.0%;	Score 198;	DB 6;	Length 287;
Best Local Similarity	24.9%;	Pred. No. 1, 7e-11;		
Matches	53;	Conservative	48;	Mismatches 80; Indels 32; Gaps 6

Qy	1	LPICPGAARCVLTLDLFDRAVLVSHYIHNTLSSEMFSEDFKRY---	THGRGFLTKALNS	57
		:	:	
Db	18	LPMLQEGSAFPRIPLTSRLTFDNLARHRLHQLALFDLYQEFEEBAYIPKQKRYSPQNDQTS		77
		:	:	
Qy	58	-CHTSLAPPEKQEQOQNNQKDFSLIYISLNSMPEPLHVLTE-----VRGQGEAPEA		111
		:	:	
Db	78	LCFSEBIPFPSSNEELQOKSNLELKLISLLILISWLEPQFLASVFLANSILVYAGSDSNVY		133
		:	:	
Qy	112	ILSKAVEIEQTRLLEKME-----LIVSQVHPETKENELIYVWSGLPDLQMADESKR		164
		:	:	
Db	138	DLIK--DLREGIQTLMGRLLEDGSPRTQGIQKQYTSKFDTV-----SHNDDA		181
		:	:	
Qy	165	LSAYYMLHCLRRDSHKIDNYLKLKCRIIHNN		197
		:	:	
Db	182	LKKNGLLYCFRDMQDKVETFLPLIVQCRSVEGS		214
		:	:	

```
RESULT 8
US-10-954-468-24
; Sequence 24, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaes, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 24
; LENGTH: 287
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-24

Query Match      19.0%; Score 198; DB 6; Length 287;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

QY 1 LPTCGGAAQCQVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRY---THGRGFTKAINS 57
DB 18 LPMIOEGSAFPTTFLSLRFLDNMLRAHRLHQLADPTVOEFBEAYIPKQOKSFLONPOTS 77
QY 58 -CHTSLATPEDEKQAOQNNOKDFLSLIVSLRSWNEPLVHLVTE-----VRGQEAPEA 111
DB 78 LCFSESIPTPSNRRETQOKSNLELRISLLLIQSWLEPVQFLRSVFANSVLVYGASDSNVY 137
QY 112 ILSKAVEIEBOTKRLERME-----LIVSQVHPETKENELIYVWSGLPSLQMADESR 164
DB 138 DLK--DLDEGIQTLMGRLEBDSPTGQIFKQTVSKPDTN-----SHNDDA 181
QY 165 LSAYYNLHCLRRDSHKIDNYLKLKCRHINN 197
DB 182 LKNYGLLYCFRKMDKVTFLRLIVQCRSVEGS 214

RESULT 9
US-10-954-468-20
; Sequence 20, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaes, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
```

```
;; PRIOR FILING DATE: 2003-12-16
;; PRIOR APPLICATION NUMBER: 60/534,654
;; PRIOR FILING DATE: 2004-01-07
;; PRIOR APPLICATION NUMBER: 60/534,819
;; PRIOR FILING DATE: 2004-01-07
;; PRIOR APPLICATION NUMBER: 60/554,640
;; PRIOR FILING DATE: 2004-03-19
;; PRIOR APPLICATION NUMBER: 60/573,525
;; PRIOR FILING DATE: 2004-05-21
;; PRIOR APPLICATION NUMBER: 60/581,833
;; PRIOR FILING DATE: 2004-06-22
;; PRIOR APPLICATION NUMBER: 60/584,956
;; PRIOR FILING DATE: 2004-07-02
;; NUMBER OF SEQ ID NOS: 54
;; SOFTWARE: FastSeq for Windows Version 4.0
;; SEQ ID NO 20

US-10-954-468-20

Query Match      19.0%; Score 198; DB 6; Length 288;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

QY 1 LPTCGGAAQCQVTLRDLFDRAVVLSHYIHNLSSEMFSEPDKRY---THGRGFTKAINS 57
DB 18 LPMIOEGSAFPTTFLSLRFLDNMLRAHRLHQLADPTVOEFBEAYIPKQOKSFLONPOTS 77
QY 58 -CHTSLATPEDEKQAOQNNOKDFLSLIVSLRSWNEPLVHLVTE-----VRGQEAPEA 111
DB 78 LCFSESIPTPSNRRETQOKSNLELRISLLLIQSWLEPVQFLRSVFANSVLVYGASDSNVY 137
QY 112 ILSKAVEIEBOTKRLERME-----LIVSQVHPETKENELIYVWSGLPSLQMADESR 164
DB 138 DLK--DLDEGIQTLMGRLEBDSPTGQIFKQTVSKPDTN-----SHNDDA 181
QY 165 LSAYYNLHCLRRDSHKIDNYLKLKCRHINN 197
DB 182 LKNYGLLYCFRKMDKVTFLRLIVQCRSVEGS 214

RESULT 10
US-10-954-468-22
; Sequence 22, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glaes, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954,468
; PRIOR FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507,168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516,806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529,826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534,654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534,819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554,640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573,525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581,833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584,956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
```



```

; LENGTH: 288
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-22

Query Match          19.0%; Score 198; DB 6; Length 288;
Beet Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

Qy      1 LPICPGGAARCOVTLRLDFDRAVVLISHYIHNLSMSEFSEFDKRY---THRGGFTITKAINS 57
Db      18 LPWIOEGSAPFTIPLISRLFDNAMLRAHRLHQLAFTDYQFEFBAVYIPKEQKYSFLLGNPOTS 77
Qy      58 -CHNSLTLPRDKEAQOQNKQKDFSLVLSILRSNNEELHYLVE-----VRGQGEAPEA 111
Db      78 LCFSSSITPPSRREETQOKSNLELRISLLISQLWLEPQVFRSVPANSLVYGASDSNVY 137
Qy      112 ILSKVEIEEQTKRLERME-----LIVSQVHEPTEKENEIYVWGLPSLOMADESR 164
Db      138 DLK--DLEGEGTLMGRLEDGSPRTGQIFKQTYKPKPTN-----SHNDA 181
Qy      165 LSAYYNLAHCLRRDSHKIDNYLKLKCRITHHN 197
Db      182 LKQVGLLYCFRKDMDKVETFLRIYQCRSVES 214

RESULT 11
US-10-954-468-23
; Sequence 23, Application US/10954468
; Publication No. US20050287151A1
; GENERAL INFORMATION:
; APPLICANT: Glass, David J.
; TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
; FILE REFERENCE: REG 1070A
; CURRENT APPLICATION NUMBER: US/10/954, 468
; CURRENT FILING DATE: 2004-10-01
; PRIOR APPLICATION NUMBER: 60/507, 168
; PRIOR FILING DATE: 2003-09-30
; PRIOR APPLICATION NUMBER: 60/516, 806
; PRIOR FILING DATE: 2003-11-03
; PRIOR APPLICATION NUMBER: 60/529, 826
; PRIOR FILING DATE: 2003-12-16
; PRIOR APPLICATION NUMBER: 60/534, 654
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/534, 819
; PRIOR FILING DATE: 2004-01-07
; PRIOR APPLICATION NUMBER: 60/554, 640
; PRIOR FILING DATE: 2004-03-19
; PRIOR APPLICATION NUMBER: 60/573, 525
; PRIOR FILING DATE: 2004-05-21
; PRIOR APPLICATION NUMBER: 60/581, 833
; PRIOR FILING DATE: 2004-06-22
; PRIOR APPLICATION NUMBER: 60/584, 956
; PRIOR FILING DATE: 2004-07-02
; NUMBER OF SEQ ID NOS: 54
; SOFTWARE: FaastSeq for Windows Version 4.0
; SEQ ID NO 23
; LENGTH: 288
; TYPE: PRT
; ORGANISM: homo sapien
US-10-954-468-23

Query Match          19.0%; Score 198; DB 6; Length 288;
Beet Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

Qy      1 LPICPGGAARCOVTLRLDFDRAVVLISHYIHNLSMSEFSEFDKRY---THRGGFTITKAINS 57
Db      18 LPWIOEGSAPFTIPLISRLFDNAMLRAHRLHQLAFTDYQFEFBAVYIPKEQKYSFLLGNPOTS 77
Qy      58 -CHNSLTLPRDKEAQOQNKQKDFSLVLSILRSNNEELHYLVE-----VRGQGEAPEA 111
Db      78 LCFSSSITPPSRREETQOKSNLELRISLLISQLWLEPQVFRSVPANSLVYGASDSNVY 137
Qy      112 ILSKVEIEEQTKRLERME-----LIVSQVHEPTEKENEIYVWGLPSLOMADESR 164
Db      138 DLK--DLEGEGTLMGRLEDGSPRTGQIFKQTYKPKPTN-----SHNDA 181
Qy      165 LSAYYNLAHCLRRDSHKIDNYLKLKCRITHHN 197
Db      182 LKQVGLLYCFRKDMDKVETFLRIYQCRSVES 214

78 LCFSSSITPPSRREETQOKSNLELRISLLISQLWLEPQVFRSVPANSLVYGASDSNVY 137
58 -CHNSLTLPRDKEAQOQNKQKDFSLVLSILRSNNEELHYLVE-----VRGQGEAPEA 111
18 LPWIOEGSAPFTIPLISRLFDNAMLRAHRLHQLAFTDYQFEFBAVYIPKEQKYSFLLGNPOTS 77
1 LPICPGGAARCOVTLRLDFDRAVVLISHYIHNLSMSEFSEFDKRY---THRGGFTITKAINS 57
Qy      58 -CHNSLTLPRDKEAQOQNKQKDFSLVLSILRSNNEELHYLVE-----VRGQGEAPEA 111
Qy      78 LCFSSSITPPSRREETQOKSNLELRISLLISQLWLEPQVFRSVPANSLVYGASDSNVY 137
Db      182 LKQVGLLYCFRKDMDKVETFLRIYQCRSVES 214

```

```

Oy 112 ILKAVNEIEQOTRLERME-----LIYSQVHPETKEMEIYPVWSGLSLQWADESR 164
Db 138 DLK--DLREGIQTLMGRLEDGSEPRGQITKQIYSKPDN-----SHNDDA 181

165 LSAVYNLLHCLRRDSHKIDNYLKLKRIHNN 197
Db 182 LKNYGLLYCFRKDMDKVETFLRIYQCRSVGS 214

RESULT 12
US-10-954-468-19
; Sequence 19, Application US/10954468
; Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glaes, David J.
TITLE OF INVENTION: SECRETED PROTEIN THERAPEUTICS AND USES THEREOF
FILE REFERENCE: REG 1070A
CURRENT APPLICATION NUMBER: US/10/954,468
CURRENT FILING DATE: 2004-10-01
PRIOR APPLICATION NUMBER: 60/507,168
PRIOR FILING DATE: 2003-09-30
PRIOR APPLICATION NUMBER: 60/516,806
PRIOR FILING DATE: 2003-11-03
PRIOR APPLICATION NUMBER: 60/529,826
PRIOR FILING DATE: 2003-12-16
PRIOR APPLICATION NUMBER: 60/534,654
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/534,819
PRIOR FILING DATE: 2004-01-07
PRIOR APPLICATION NUMBER: 60/554,640
PRIOR FILING DATE: 2004-03-19
PRIOR APPLICATION NUMBER: 60/573,525
PRIOR FILING DATE: 2004-05-21
PRIOR APPLICATION NUMBER: 60/581,833
PRIOR FILING DATE: 2004-06-22
PRIOR APPLICATION NUMBER: 60/584,956
PRIOR FILING DATE: 2004-07-02
NUMBER OF SEQ ID NOS: 54
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 19
LENGTH: 289
TYPE: PRT
ORGANISM: homo sapien
US-10-954-468-19

Query Match 19.0%; Score 198; DB 6; Length 289;
Best Local Similarity 24.9%; Pred. No. 1.7e-11;
Matches 53; Conservative 48; Mismatches 80; Indels 32; Gaps 6;

Oy 1 LPIPGGAARQCVTLRLDFRAVVLISHYIHNLSSEMSSEPDKRY---THRGPIITKAINS 57
Db 18 LPMIQEGSAFFETILSLRLFDAAMLRAHRLHQLADTYQEFBEAVIIPKQKXSFLONPQTS 77

58 -CHTSSLATPEDKKEQAQQMNQKDFLSLIVSLIRSWNEPLVHLVTE----VRGQGEAPEA 111
Oy 78 LCFSESIPTPSNRRETOOKSNWLELIRLSILLIOQSWLEFVQFLRSFANSLVYGASDSNVY 137
Db 112 ILKAVNEIEQOTRLERME-----LIYSQVHPETKEMEIYPVWSGLSLQWADESR 164
Oy 138 DLK--DLREGIQTLMGRLEDGSEPRGQITKQIYSKPDN-----SHNDDA 181
Db 165 LSAVYNLLHCLRRDSHKIDNYLKLKRIHNN 197
Oy 182 LKNYGLLYCFRKDMDKVETFLRIYQCRSVGS 214

RESULT 13
US-10-954-468-21
; Sequence 21, Application US/10954468
; Publication No. US20050287151A1
GENERAL INFORMATION:
APPLICANT: Glaes, David J.

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	Matches	53;	Conservative	48;	Mismatches	80;	Indels	32;	Gaps	6;
Qy	1	LPICPGARCOVTLRDLFDPRAVLSHYIHNLSSEMFSEFDKRY--	THGRGFTKAINS	57						
Db	18	LPMLOEGSAFPTIPLSRLLFDNMALRAHRLHQLAFDTYQFEFEAYIPKEQKYSFLQNPOTS	77							
Qy	58	-CHTSSLATPEDKEQAQOMNQKDFLSLIVISLSRSMNEPLVHLYTE----	VRGMQEAPEA	111						
Db	78	LCFSESIPTPSNREETQOKSNLELRISLLIQSWLEPVQFLRSVFANSIVYGAQSDSNVY	137							
Qy	112	IISKAVIEEQTKRLERME-----LIVSQVHPETKENETYPVWSGLPSLQMADESR	164							
Db	138	DLTK--DLEEGIQTLGRLSDGSPRTGQIFKQYTSKFDTN-----	SHNDA	181						
Qy	165	LSAYVNLHCLRRDSHKIDNYLKLKCRIIHNN	197							
Db	182	LKKNYGLLYCFRKMDKVEFLRIYQGRVSGS	214							

Search completed: January 6, 2006, 14:37:02
 Job time : 14 secs

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